

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

3A23		
Revision 28		
MAULE		
Bee Dee M-4	M-5-180C	MXT-7-160
M-4	M-5-200	MX-7-180A
M-4C	M-5-210C	MXT-7-180A
M-4S	M-5-210TC	MX-7-180B
M-4T	M-5-220C	MXT-7-420
M-4-180C	M-5-235C	M-7-235B
M-4-180S	M-6-180	M-7-235A
M-4-180T	M-6-235	M-7-235C
M-4-210	M-7-235	MX-7-180C
M-4-210C	MX-7-235	M-7-260
M-4-210S	MX-7-180	MT-7-260
M-4-210T	MX-7-420	M-7-260C
M-4-220	MXT-7-180	M-7-420AC
M-4-220C	MT-7-235	MX-7-160C
M-4-220S	M-8-235	MX-7-180AC
M-4-220T	MX-7-160	
May 23, 2000		

TYPE CERTIFICATE DATA SHEET NO. 3A23

This data sheet which is part of Type Certification No. 3A23 prescribes conditions and limit under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: MAULE AEROSPACE TECHNOLOGY, INC.
2099 GEORGIA HIGHWAY 133 SOUTH
MOULTRIE, GEORGIA 31768

I. Model Bee Dee M-4, 4 PCLM (Normal Category), Approved August 10, 1961

Model **M-4**, 4 PCLM (Normal Category), Approved February 21, 1963

Model **M-4C**, 4 PCLM (Normal Category), Approved October 7, 1965

(Same as Model M-4 except for modified right fuselage truss, larger rear doors to facilitate cargo loading, and other minor changes.)

Model **M-4S**, 4 PCLM (Normal Category), Approved March 15, 1966

(Same as Model M-4 except for minor changes.)

Model **M-4T**, 2 PCLM (Normal Category), Approved March 15, 1966

(Same as Model M-4C except no rear seats or rear door and other minor changes.)

Engine Continental 0-300-A or B

Fuel 80/87 minimum grade aviation gasoline

Engine limits For all operations, 2700 rpm (145 hp) (See NOTE 3)

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Propeller and propeller limits	McCauley 1A170-DM7460	
	Diameter:	Not over 74 in., not under 73 in. No further reduction permitted.
	Static rpm at maximum permissible throttle setting:	Not over 2200, not under 2100 No additional tolerance permitted.
	McCauley 1C172-MDM7647 to 7656 (Eligible on s/n 24, 46-94, 1C-11C, 1S-3S, 1T-3T) (Eligible on s/n 3-23, 25-45 when modified per Maule Modification Kit No. 36)	
	Diameter:	Not over 76 in., not under 74.5 in. No further reduction permitted.
	Static rpm at maximum permissible throttle setting:	Not over 2250, not under 2100 No additional tolerance permitted.
Airspeed limits (CAS)	<u>Landplane:</u>	Never exceed 180 mph (156 knots)
		Maximum structural cruising 145 mph (126 knots)
	Maneuvering	125 mph (109 knots)
	Flaps extended	90 mph (78 knots)
	<u>Skiplane:</u>	(Models M-4, M-4C) Fli-Lite 3000 MK IIIA Skis
		Never exceed 160 mph (139 knots)
		Maximum structural cruising 145 mph (126 knots)
	Maneuvering	125 mph (109 knots)
	Flaps extended	90 mph (78 knots)
C.G. range	<u>Landplane:</u>	(+15.0) to (+23.0) at 2100 lbs. (+11.0) to (+23.0) at 1400 lbs. or less NOTE: With fuel in optional auxiliary tanks, aft C.G. restricted to (+18.0). See Service Bulletin No. 18, Airplane Flight Manual Supplement (AFMS) No. 4 is required.
	<u>Skiplane:</u>	(Models M-4, M-4C) Fli-Lite 3000 MK IIIA Skis (+13.0) to (+23.0) at 1850 lbs. (+10.6) to (+23.0) at 1550 lbs. or less (Models M-4, M-4C) FluiDyne A2000A Skis (+15.0) to (+23.0) at 2100 lbs. (+11.0) to (+23.0) at 1400 lbs. or less
Empty weight C.G. range	None	
Maximum weight	Landplane:	2100 lbs.
	Skiplane:	Fli-Lite 3000 MK IIIA Skis: 1850 lbs. Federal A2000A Skis: 2100 lbs.
Number of seats	4 (2 at +18 to +21, 2 at +53)(Bee Dee M-4, M-4, M-4C, M-4S) 2 (+18 to +21) (M-4T)	
Maximum baggage	100 lbs. (+72) (Bee Dee M-4, M-4)	
	100 lbs. (+20), 350 lbs. (+42)(M-4C, M-4S, M-4T)	
	250 lbs. (+70) (M-4C, M-4S)	
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)	

Oil capacity	8 qt. (-37), 4 qt. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	Wing flaps	Down	1st Notch $15^{\circ} \pm 3^{\circ}$ 2nd Notch $35^{\circ} \pm 3^{\circ}$
	Aileron	Up $20^{\circ} \pm 1$	Down $20^{\circ} \pm 1^{\circ}$
	Elevator	Up $25^{\circ} \pm 2^{\circ}$	Down $21^{\circ} \pm 1^{\circ}$
	Elevator tab	Up $14^{\circ} \pm 1^{\circ}$	Down $25^{\circ} \pm 1^{\circ}$ (Bee Dee M-4, s/n 3-14, M-4, s/n 15-43, unless modified by Maule SL#9 dated 11/8/65)
		Up $8^{\circ} + 2^{\circ} - 1^{\circ}$	Down $25^{\circ} \pm 1^{\circ}$ (M-4, s/n 44-94, unless modified by Maule SL#9 dated 11/8/65)
		Up $11^{\circ} \pm 3^{\circ}$	Down $25^{\circ} \pm 1^{\circ}$ (All M-4C, S, and T and M-4, s/n 3-94 modified by Maule SL#9 dated 11/8/65)
	Rudder	Right $21^{\circ} \pm 1^{\circ}$	Left $21^{\circ} \pm 1^{\circ}$
	Rudder tab	Right $48^{\circ} \pm 4^{\circ}$	Left $48^{\circ} \pm 4^{\circ}$
Serial numbers eligible	Model Bee Dee M-4, 3-14 Model M-4, 15 and up Model M-4C, 1C and up Model M-4S, 1S and up Model M-4T, 1T and up		
Production basis	(No longer in production)		

II. Model **M-4-210**, 4 PCLM (Normal Category), Approved September 24, 1964
 Model **M-4-210C**, 4 PCLM (Normal Category), Approved October 7, 1965
 Model **M-4-210S**, 4 PCLM (Normal Category), Approved March 15, 1966
 Model **M-4-210T**, 2 PCLM (Normal Category), Approved March 15, 1966

(Same as M-4, M-4C, M-4S, and M-4T except for the installation of a Continental I0-360-A or D engine.)

Engine	Continental I0-360-A Continental I0-360-D for s/n 1086C and up		
Fuel	100/100LL minimum grade aviation gasoline		
Engine limits	<u>I0-360-A:</u>	Maximum continuous hp, rpm, in. Hg. alt.	
		Critical altitude	195-2800-26.2-2250 ft.
		Sea level	195-2800-26.5
		Takeoff hp (5 min.)	210-2800 F.T.
Propeller and propeller limits	<u>I0-360-D:</u>	F.T. all operations	
		210 hp - 2800 rpm	
		McCauley constant speed model D2A3467/76C-2 (used on A engine) or D2A34C67N/S76C-2 (used on A or D engine)	
		Diameter: 74 in., no further reduction permitted.	
		Pitch settings at 30 in. sta.: low 12.5° high 23°	
		Spinner: Cessna 0552016-1	
		McCauley D-2771-1 assembly (used on A or D eng.)	
		Governor (hydraulic): Woodward F210452 or B210680	

Airspeed limits (CAS)	<u>Landplane:</u>	Never exceed	180 mph (156 knots)
		Max. structural cruising	145 mph (126 knots)
		Maneuvering	125 mph (109 knots)
		Flaps extended	90 mph (78 knots)
	<u>Skiplane:</u>	(Models M-4-210, M-4-210C) Fli-Lite 3000 MK IIIA, Federal C3000H or C2200H Skis	
		Never exceed	160 mph (139 knots)
		Max. structural cruising	145 mph (126 knots)
		Maneuvering	125 mph (109 knots)
		Flaps extended	90 mph (78 knots)
		Federal A2000A	
		Never exceed	180 mph (156 knots)
		Max. structural cruising	145 mph (126 knots)
		Maneuvering	125 mph (109 knots)
		Flaps extended	90 mph (78 knots)
C.G. range	<u>Landplane</u>	For s/n 1001-1045, 1001C-1074C, 1079C, 1080C: (+15.0) to (+23.0) at 2100 lbs. (+11.0) to (+23.0) at 1400 lbs. or less For s/n 1075C, 1081C-1117C: (+16.0) to (+19.6) at 2300 lbs. (+15.0) to (+23.0) at 2100 lbs. (+11.0) to (+23.0) at 1400 lbs. or less NOTE: S/n 1001-1035 when modified per Maule SL#7 and SL#15 and s/n 1036-1045, 1001C-1074C, 1079C, 1080C when modified per Maule SL#15 dated 11/12/68 are eligible for the above C.G. range at 2300 lbs. GW.	
	<u>Skiplane:</u>	(Models M-4-210, M-4-210C) Fli-Lite 3000 MK IIIA Skis (+13.0) to (+23.0) at 2100 lbs. (+10.6) to (+23.0) at 1550 lbs. or less Federal A2000A Skis (+15.0) to (+23.0) at 2100 lbs. (+11.0) to (+23.0) at 1400 lbs. or less (Models M-4-210, M-4-210C, M-4-210S, M-4-210T) Federal C2200H or C3000H Skis (+12.6) to (+18.4) at 2100 lbs. (+9.6) to (+18.4) at 1620 lbs. or less Straight line variation between points given.	
	<u>Floatplane:</u>	EDO 248A2440, 248B2440 or Fleet 2500 Floats (+15.5) to (+20.5) at 2300 lbs. (+11.0) to (+20.5) at 1600 lbs. or less CAP 62-2000 Floats (+15.6) to (+20.5) at 2220 lbs. (+12.0) to (+20.5) at 1700 lbs. or less	
Empty weight C.G. range	None		

Maximum weight	<u>Landplane:</u>	2300 lbs. or 2100 lbs. (Reference C.G. Range -landplane)
	<u>Skiplane:</u>	2100 lbs.
	<u>Floatplane:</u>	Fleet 2500, EDO 248A2440 or 248B2440 Floats: 2300 lbs. CAP 62-2000 Floats: 2220 lbs.
Number of seats		4 (2 at +18 to +21, 2 at +53)(M-4-210, M-4-210C, M-4-210S) 2 (+18 to +21)(M-4-210T)
Maximum baggage		100 lbs. (+72)(M-4-210) 100 lbs. (+20), 350 lbs. (+42)(M-4-210C, M-4-210S, M-4-210T) 250 lbs. (+70)(M-4-210C, M-4-210S)
Fuel capacity		43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) Optional wing auxiliary tanks - 23 gal. (23 gal. usable; two 11.5 gal. tanks in outerwings at +22.2) (Optional auxiliary tanks not approved in combination with skis or floats.)(See NOTE 1 for data on system fuel.)
Oil capacity		10 qt. (-37), 7 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movement	Wing flaps	Down 1st Notch $15^{\circ} \pm 3^{\circ}$ 2nd Notch $35^{\circ} \pm 3^{\circ}$
	Aileron	Up $20^{\circ} \pm 1^{\circ}$ Down $20^{\circ} \pm 1^{\circ}$
	Elevator	Up $25^{\circ} \pm 2^{\circ}$ Down $21^{\circ} \pm 1^{\circ}$
	Elevator tab	Up $11^{\circ} \pm 3^{\circ}$ Down $25^{\circ} \pm 1^{\circ}$ (M-4-210, s/n 1051 and up; all M-4-210C, -210S and -210T; and M-4-210 s/n 1001-1050 modified per Maule SL#9 dated 11/8/65) Up $8^{\circ} + 2^{\circ} / - 1^{\circ}$ Down $25^{\circ} \pm 1^{\circ}$ (M-4-210, s/n 1001-1050 unless modified per Maule SL#9 dated 11/8/65)
	Rudder	Right $21^{\circ} \pm 1^{\circ}$ Left $21^{\circ} \pm 1^{\circ}$
	Rudder tab	Right $48^{\circ} \pm 4^{\circ}$ Left $48^{\circ} \pm 4^{\circ}$
Serial numbers eligible		Model M-4-210, 1001 and up Model M-4-210C, 1001C and up Model M-4-210S, 1001S and up Model M-4-210T, 1001T and up
Production basis		(No longer in production)

III. Model **M-4-220**, 4 PCLM (Normal Category), Approved October 18, 1966
 Model **M-4-220C**, 4 PCLM (Normal Category), Approved October 18, 1966
 Model **M-4-220S**, 4 PCLM (Normal Category), Approved October 18, 1966
 Model **M-4-220T**, 2 PCLM (Normal Category), Approved October 18, 1966

(Same as M-4, M-4C, M-4S and M-4T except for the installation of a Franklin 6A-350-C1 engine.)

Engine	Franklin 6A-350-C1
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	Takeoff (5 min.) 2800 rpm, F.T. (220 hp). For all other operations, 2800 rpm at 26.5 in. hg. (194 hp) (See NOTE 8)

Propeller and propeller limits	McCauley constant speed model 2A31C21/84S-8 or -6 Diameter: Not over 78 in.; not under 74 in. Pitch settings at 30 in. sta.: low 12.8° high 23.1° Spinner: Cessna 0552016-1 McCauley constant speed model 2A34C22-N/S84SF-6 or -8 Diameter: Not over 78 in.; not under 74.5 in. Pitch settings at 30 in. sta.: low 11.5° high 22° Spinner: McCauley D4101 assembly NOTE: This installation also requires incorporation of Maule Drawings 5030F, rev. D, 5090B, rev. D, 5043F, rev. G. Governor: Woodward 210453 or 210660		
Airspeed limits (CAS)	<u>Landplane:</u>	Never exceed Max. structural cruising Maneuvering Flaps extended	180 mph (156 knots) 145 mph (126 knots) 125 mph (109 knots) 90 mph (78 knots)
	<u>Skiplane:</u>	Never exceed Max. structural cruising Maneuvering Flaps extended	160 mph (139 knots) 145 mph (126 knots) 125 mph (109 knots) 90 mph (78 knots)
	<u>Floatplane:</u>	Never exceed Max. structural cruising Maneuvering Flaps extended	164 mph (143 knots) 145 mph (126 knots) 125 mph (109 knots) 90 mph (78 knots)
C.G. range	<u>Landplane:</u>	(+15.6) to (+19.0) at 2300 lbs. (+14.5) to (+20.5) at 2100 lbs. (+11.1) to (+20.5) at 1500 lbs. or less Model M-4-220S, s/n 2001S only: (+15.0) to (+20.5) at 2100 lbs. (+11.0) to (+20.5) at 1400 lbs. or less Straight line variation between points given. NOTE: With fuel in optional wing auxiliary tanks, aft C.G. restricted to +18.0.	
	<u>Skiplane:</u>	Federal C2200H Skis (+12.6) to (+18.4) at 2100 lbs. (+9.6) to (+18.4) at 1620 lbs. or less Model M-4-220C only: Federal A2000A Skis (+14.5) to (+20.5) at 2100 lbs. (+11.1) to (+20.5) at 1500 lbs. or less Fli-Lite 3000 MK IIIA Skis (+14.5) to (+20.5) at 2300 lbs. (+11.1) to (+20.5) at 1500 lbs. or less	
	<u>Floatplane:</u>	EDO 248A2440, 248B2440 or Fleet 2500 Floats (+15.5) to (+20.5) at 2300 lbs. (+11.0) to (+20.5) at 1600 lbs. or less	
Empty weight C.G. range	None		
Maximum weight	<u>Landplane:</u>	2300 lbs. (M-4-220, M-4-220C, M-4-220S (s/n 2002S and up), M-4-220T) 2100 lbs. (s/n 2001S only)	
	<u>Skiplane:</u>	2100 lbs.	
	<u>Floatplane:</u>	2300 lbs.	

Number of seats	4 (2 at +18 to +21, 2 at +53)(M-4-220, M-4-220C, M-4-220S) 2 (+18 to +21)(M-4-220T)		
Maximum baggage	100 lbs. (+70)(M-4-220) 100 lbs. (+20), 350 lbs. (+42)(M-4-220C, M-4-220S, M-4-220T) 250 lbs. (+70)(M-4-220C, M-4-220S)		
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) Optional wing auxiliary tanks 23 gal. (23 gal. usable; two 11.5 gal. tanks in wings at +22.2) (Optional auxiliary tanks not approved in combination with skis or floats)(See NOTE 1 for data on system fuel.)		
Oil capacity	8.8 qt.(-37), 5.8 qt. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	Wing flaps	Down	1st Notch $15^{\circ} \pm 3^{\circ}$ 2nd Notch $35^{\circ} \pm 3^{\circ}$
	Aileron	Up $20^{\circ} \pm 1^{\circ}$	Down $20^{\circ} \pm 1^{\circ}$
	Elevator	Up $25^{\circ} \pm 2^{\circ}$	Down $21^{\circ} \pm 1^{\circ}$
	Elevator tab	Up $11^{\circ} \pm 3^{\circ}$	Down $25^{\circ} \pm 1^{\circ}$
	Rudder	Right $21^{\circ} \pm 1^{\circ}$	Left $21^{\circ} \pm 1^{\circ}$
	Rudder tab	Right $48^{\circ} \pm 4$	Left $48^{\circ} \pm 4^{\circ}$
Serial numbers eligible	Model M-4-220, 2001 and up Model M-4-220C, 2001C and up Model M-4-220S, 2001S and up Model M-4-220T, 2001T and up		
Production basis	(No longer in production)		

IV. Model **M-4-180C**, 4 PCLM (Normal Category), Approved October 20, 1970
 Model **M-4-180S**, 4 PCLM (Normal Category), Approved October 20, 1970
 Model **M-4-180T**, 2 PCLM (Normal Category), Approved October 20, 1970

(Same as M-4C, M-4S and M-4T except for the installation of Franklin 6A-335-B1A engine.)

Engine	Franklin 6A-335-B1A		
Fuel	80/87 minimum grade aviation gasoline		
Engine limits	For all operations, 2800 rpm (180 hp)		
Propeller and propeller limits	McCauley constant speed model 2A34C22-N/S84SF-6 Diameter: Not over 78 in.; not under 76.5 in. Pitch settings at 30 in. sta.: low 11.5° high 22° Spinner: McCauley D4180 with C4181 bulkhead assembly, B3243 front support, B3410-16 or -32 shim. Governor: Woodward 210453 or 210660		
Airspeed limits (CAS)	Never exceed	180 mph (156 knots)	
	Max. structural		
	cruising	145 mph (126 knots)	
	Maneuvering	125 mph (109 knots)	
	Flaps extended	90 mph (78 knots)	
C.G. Range	(+15.6) to (+19.0) at 2300 lbs. (+14.5) to (+20.5) at 2100 lbs. (+11.1) to (+20.5) at 1500 lbs. or less Straight line variation between points given. NOTE: With fuel in optional wing auxiliary tanks, aft C.G. restricted to (+18.0). See Service Bulletin No. 18, AFMS No. 2 is required.		

Empty weight			
C.C. Range	None		
Maximum weight	2300 lbs.		
Number of seats	4 (2 at +18 to +21, 2 at +53) (M-4-180C, M-4-180S) 2 (+18 to +21) (M-4-180T)		
Maximum baggage	100 lbs. (+20), 350 lbs. (+42) (M-4-180C, M-4-180S, M-4-180T) 250 lbs. (+70) (M-4-180C, M-4-180S)		
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)		
Oil capacity	8.8 qt. (-37), 5.8 qt. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	Wing flaps	Down	1st Notch 15° ±3° 2nd Notch 35° ±3°
	Aileron	Up 20° ±1°	Down 20° ±1°
	Elevator	Up 25° ±2°	Down 21° ±1°
	Elevator tab	Up 11° ±3°	Down 25° ±1°
	Rudder	Right 21° ±1°	Left 21° ±1°
	Rudder tab	Right 48° ±4°	Left 48° ±4°
Serial numbers eligible	Model M-4-180C, 3001C and up Model M-4-180S, 3001S and up Model M-4-180T, 3001T and up		
Production basis	(No longer in production)		

V. Model **M-5-210C**, 4 PCLM (Normal Category), Approved December 28, 1973

(Same as M-4-210C except modified empennage, increased span flaps, smaller ailerons, modified C.G. range and other minor changes.)

Engine	Continental IO-360-D
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	210 hp at 2800 rpm all operations
Propeller and propeller limits	McCauley constant speed model D2A34C67N/S76C-2 Diameter: 74 in., no further reduction permitted. Pitch settings at 30 in. sta.: low 12.5° high 23° Spinner: McCauley spinner assembly D-2771-1 Governor (hydraulic): Woodward B210680 or F210452
Airspeed limits (CAS)	<u>Landplane:</u> (See NOTE 11) <u>Floatplane:</u> (See NOTE 11) <u>Skiplane:</u> (See NOTE 11)
C.G. range	<u>Landplane:</u> (+16.0) to (+20.5) at 2300 lbs. (+15.0) to (+20.5) at 2100 lbs. (+12.0) to (+20.5) at 1600 lbs. or less All s/n modified per Maule SL#45 and SL#46: (+17.0) to (+20.5) at 2500 lbs. (+15.0) to (+20.5) at 2100 lbs. (+12.0) to (+20.5) at 1600 lbs. or less

C.G. Range (cont'd)	<u>Floatplane:</u> EDO 248A2440 or 248B2440 Floats (+16.0) to (+18.0) at 2300 lbs. (+12.0) to (+18.0) at 1600 lbs. or less Pee Kay 2300 Floats (+15.5) to (+20.0) at 2300 lbs. (+14.0) to (+20.0) at 1800 lbs. or less Note: M-5-210C s/n 6001C-6014C, 6039C, 6043C-6045C requires compliance to Maule SL#28 when equipped with EDO 248A2440/B2440 floats.		
	<u>Skiplane:</u> Fluidyne C2200H Skis (+12.5) to (+20.0) at 2300 lbs. (+9.5) to (+20.0) at 1600 lbs. or less Fli-Lite 3000 MK IIIA Skis (+16.0) to (+20.0) at 2300 lbs. (+12.0) to (+20.0) at 1600 lbs. or less Straight line variation between points given.		
Empty weight			
C.G. range	None		
Maximum weight	Landplane, Skiplane and Floatplane: 2300 lbs. Landplane modified per SL#45 and SL#46: 2500 lbs.		
Number of seats	4 (2 at +20, 2 at +48.8)		
Maximum baggage	100 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)		
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +23.3) Optional wing auxiliary tanks 23 gal. (23 gal. usable; two 11.5 gal. tanks in wings at +22.2) (See NOTE 1 for data on system fuel.)		
Oil capacity	10 qt. (-37) 7 qt. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	Wing flaps	Down	1st Notch 15° ±3° 2nd Notch 35° ±3°
	Modified per	Down	1st Notch 20° ±3° 2nd Notch 40° ±3°
	Maule SL#46		
	Aileron	Up 20° ±1°	Down 20° ±1°
	Elevator	Up 25° ±2°	Down 21° ±1°
	Elevator tab	Up 12° ±4°	Down 29° ±2°
	Rudder	Right 21° ±1°	Left 21° ±1°
	Rudder tab	Right 48° ±4°	Left 48° ±4°
Serial numbers eligible	Model M-5-210C, 6001C and up (See NOTE 13 for float installation requirements.)		
Production basis	(No longer in production)		

VI. Model **M-5-220C**, 4 PCLM (Normal Category), Approved December 28, 1973

(Same as M-4-220C except modified empennage, increased span flaps, smaller ailerons, and other minor changes.)

Engine	Franklin 6A-350-C1
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	220 hp at 2800 rpm, all operations

Propeller and propeller limits	McCauley constant speed model 2A34C22-N/S84SF-6 or -8 Diameter: Not over 78 in., not under 74.5 in. Pitch settings at 30 in. sta.: low 11.5° high 22° Spinner: McCauley D4180 with C4181 bulkhead assembly, B3243 front support, B3410-16 or -32 shim Governor: Woodward 210453 or 210660			
Airspeed limits (CAS)	<u>Landplane:</u>	(See NOTE 11)		
	<u>Floatplane:</u>	(See NOTE 11)		
	<u>Skiplane:</u>	(See NOTE 11)		
C.G. range	<u>Landplane:</u>	(+16.0) to (+20.5) at 2300 lbs. (+15.0) to (+20.5) at 2100 lbs. (+12.0) to (+20.5) at 1600 lbs. or less All s/n modified per Maule SL#48 and SL#51: (+17.0) to (+20.5) at 2500 lbs. (+15.0) to (+20.5) at 2100 lbs. (+12.0) to (+20.5) at 1600 lbs. or less		
	<u>Floatplane:</u>	EDO 248A2440 or 248B2440 Floats (+16.0) to (+18.0) at 2300 lbs. (+12.0) to (+18.0) at 1600 lbs. or less Pee Kay 2300 Floats (+15.5) to (+20.0) at 2300 lbs. (+14.0) to (+20.0) at 1800 lbs. or less NOTE: M-5-220C, s/n 5002C, 5019C, 5020C, 5022C-5024C requires compliance to Maule SL#28 when equipped with EDO 248A2440/B2440 floats.		
	<u>Skiplane:</u>	FluiDyne C2200H Skis (+12.5) to (+20.0) at 2300 lbs. (+9.5) to (+20.0) at 1600 lbs. or less Straight line variation between points given.		
Empty weight C.G. range	None			
Maximum weight	Landplane, Skiplane and Floatplane: 2300 lbs. Landplane modified per SL#48 and SL#51: 2500 lbs.			
Number of seats	4 (2 at 15.1 to +18.1, 2 at 48.8)			
Maximum baggage	100 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)			
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +23.3) Optional wing auxiliary tanks 23 gal. (23 gal. usable; two 11.5 gal. tanks in wings at +22.2) (See NOTE 1 for data on system fuel.)			
Oil capacity	8.8 qt. (-37) 5.8 qt. minimum (See NOTE 1 for data on system oil.)			
Control surface movements	Wing flaps	Down	1st Notch 15° ±3° 2nd Notch 35° ±3°	
	Modified per Maule SL#48	Down	1st Notch 20° ±3° 2nd Notch 40° ±3°	
	Aileron	Up 20° ±1°	Down 20° ±1°	
	Elevator	Up 25° ±2°	Down 21° ±1°	
	Elevator tab	Up 12° ±4°	Down 29° ±2°	
	Rudder	Right 21° ±1°	Left 21° ±1°	
	Rudder tab	Right 48° ±4°	Left 48° ±4°	
Serial numbers eligible	Model M-5-220C, 5001C and up. (See NOTE 13 for float installation requirement.)			
Production basis	(No longer in production)			

VII. Model M-5-235C, 4 PCLM (Normal Category), Approved April 6, 1976

(Same as M-5-220C except for nacelle, engine, propeller and electrical system.)

Engine	Lycoming	O-540-J1A5D, O-540-J3A5, IO-540-W1A5D, IO-540-W1A5, or O-540-B4B5
Fuel		100/100LL minimum grade aviation gasoline
Engine limits		235 hp at 2400 rpm, all operations (O-540-J/IO-540-W) 235 hp at 2575 rpm, all operations (O-540-B)
Propeller and propeller limits		(See NOTE 14)
Airspeed limits (CAS)	<u>Landplane:</u> <u>Floatplane:</u> <u>Skiplane:</u>	(See NOTE 11) (See NOTE 11) (See NOTE 11)
C.G. range	<u>Landplane</u> or - or - or - or - <u>Floatplane:</u> <u>Skiplane:</u>	S/n 7001C-7026C, 7028C, 7030C-7032C, 7037C (+16.0) to (+20.5) at 2300 lbs. (+12.0) to (+20.5) at 1600 lbs. or less S/n 7001C-7026C, 7028C, 7030C-7032C, 7037C with expanded C.G. limits per Maule SL#36 (+12.5) to (+20.5) at 2300 lbs. (+10.5) to (+20.5) at 1700 lbs. or less S/n 7001C-7320C, 7322C-7346C, 7348C, 7349C modified per Maule SL#43 (+13.2) to (+20.5) at 2500 lbs. (+10.5) to (+20.5) at 1700 lbs. or less S/n 7001C-7320C, 7322C-7346C, 7348C, 7349C modified per with Maule SL#44 (+12.5) to (+20.5) at 2300 lbs. (+11.7) to (+20.5) at 1700 lbs. or less S/n 7001C-7320C, 7322C-7346C, 7348C, 7349C modified per Maule SL#43 and SL#44 and s/n 7321C, 7347C, 7351C, 7363C, 7369C and up (+13.2) to (+20.5) at 2500 lbs. (+11.7) to (+20.5) at 1700 lbs. or less Straight line variation between points given. EDO 248A2440, 248B2440 or Aqua 2400 Floats (+14.3) to (+20.0) at 2530 lbs. (+13.3) to (+20.0) at 2100 lbs. or less Pee Kay 2300 Floats (+14.3) to (+20.0) at 2500 lbs. (+13.3) to (+20.0) at 2100 lbs. or less EDO 248B2440 or 797-2500 amphibious Floats (Floatplanes modified per Maule drawing 9143A (2440's) or 9057A (amphibs)) (+14.0) to (+19.0) at 2750 lbs. (+10.5) to (+19.0) at 1600 lbs. or less FluiDyne C2200H, C3000H, C3000M or Fli-Lite 3000 MK IIIA Skis (+12.5) to (+20.0) at 2300 lbs. (+9.5) to (+20.0) at 1600 lbs. or less FluiDyne A2500A Skis (+12.9) to (+20.5) at 2300 lbs. (+11.7) to (+20.5) at 1700 lbs. or less

C.G. range (cont'd)	<u>Skiplane:</u>	Fli-Lite MK IIIA Skis (Skiplanes modified per Maule drawing 9081A) (+13.2) to (+20.0) at 2500 lbs. (+11.7) to (+20.0) at 1700 lbs. or less FluiDyne C3000M Skis (Skiplanes modified per Maule drawing 9158A) (+13.2) to (+20.0) at 2500 lbs. (+10.7) to (+20.0) at 1700 lbs. or less Straight line variation between points given.
Empty weight		
C.G. range	None	
Maximum weight	Landplane:	2300 lbs.
	Floatplane:	2530 lbs. (EDO 2440 only)
	Skiplane:	2300 lbs.
		Landplanes modified per Maule SL#43 and s/n 7321C, 7347C, 7350C and up: 2500 lbs.
		Floatplanes modified per Maule drawing 9143A (EDO 2440) or 9057A (EDO amphib): 2750 lbs.
		Skiplanes modified per Maule drawing 9081A (Fli-Lites) or 9158A (C3000M): 2500 lbs.
Number of seats		4 (2 at +20, 2 at +48.8)
Maximum baggage		170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)
Fuel capacity		43 gal. (40. gal. usable; two 21.5 gal. tanks in wings at +24)
		Optional wing auxiliary tanks 23 gal. (23 gal. usable; two 11.5 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity		IO-540: 8 qt. (-34), 5 qt. minimum O-540: 12 qt. (-34), 9 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	Wing flaps	(s/n 7001C-7320C, 7322C-7346C, 7348C-7350C, 7352C-7362C, 7364C-7368C): Down 1st Notch $15^{\circ} \pm 3^{\circ}$ 2nd Notch $35^{\circ} \pm 3^{\circ}$ (s/n 7321C, 7347C, 7351C, 7363C, 7369C and up and airplanes modified per Maule SL#44): Down 1st Notch $20^{\circ} \pm 3^{\circ}$ 2nd Notch $40^{\circ} \pm 3^{\circ}$
	Aileron	Up $20^{\circ} \pm 1^{\circ}$ Down $20^{\circ} \pm 1^{\circ}$
	Elevator	Up $25^{\circ} \pm 2^{\circ}$ Down $21^{\circ} \pm 1^{\circ}$
	Elevator tab	Up $12^{\circ} \pm 4^{\circ}$ Down $29^{\circ} \pm 2^{\circ}$
	Elevator tab w/piano hinge	Up $12^{\circ} \pm 2^{\circ}$ Down $38^{\circ} \pm 2^{\circ}$
	Rudder	Right $21^{\circ} \pm 1^{\circ}$ Left $21^{\circ} \pm 1^{\circ}$
	Rudder tab	Right $48^{\circ} \pm 4^{\circ}$ Left $48^{\circ} \pm 4^{\circ}$
Serial number eligible	Model M-5-235C, 7001C and up	(NOTE: Letter 'A' preceding serial number denotes installation of Lycoming IO-540-W1A5D fuel-injected engine and applies only to the following s/n A7354C, A7355C, A7358C, A7360C, A7361C, A7366C and A7367C.)
Production basis		(No longer in production)

VIII. Model **M-5-180C**, 4 PCLM (Normal Category), Approved April 19, 1979

(Same as M-5-235C except for nacelle, engine and propeller.)

Engine	Lycoming O-360-C1F
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	180 hp at 2700 rpm, all operations
Propeller and propeller limits	Hartzell constant speed model HC-C2YR-1BF/F7666A Diameter: Not over 76 in; not under 72 in. Pitch settings at 30 in. sta.: low 12° high 27.8° to 29.8° Avoid continuous operation between 2000 and 2250 rpm. Spinner: Hartzell spinner assembly A2298-2 Governor: Woodward H210681 McCauley C290D3(X)/T29 or DC290D1(X)/T12
Airspeed limits (CAS)	<u>Landplane:</u> (See NOTE 11)
C.G. range	<u>Landplane:</u> (+16.7) to (+20.5) at 2300 lbs. (+12.6) to (+20.5) at 1600 lbs. or less Straight line variation between points given.
Empty weight C.G. range	None
Maximum weight	<u>Landplane:</u> 2300 lbs.
Number of seats	4 (2 at +20, 2 at +48.8)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) Optional wing auxiliary tanks 23 gal. (23 gal. usable; two 11.5 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	Wing flaps (s/n 8001C-8022C): Down 1st Notch 15° ±3° 2nd Notch 35° ±3° (s/n 8023C and up and airplanes modified per Maule SL#49): Down 1st Notch 20° ±3° 2nd Notch 40° ±3° Aileron Up 20° ±1° Down 20° ±1° Elevator Up 25° ±2° Down 21° ±1° Elevator tab Up 12° ±4° Down 29° ±2° w/piano hinge Up 12° ±2° Down 38° ±2° Rudder Right 21° ±1° Left 21° ±1° Rudder tab Right 48° ±4° Left 48° ±4°
Serial number eligible	Model M-5-180C, 8001C-8014C, 8016C-8019C, 8021C, 8023C -8042C, 8044C-8064C, 8068C-8094C and up
Production basis	(No longer in production)

IX. Model M-5-210TC, 4 PCLM (Normal Category), Approved February 4, 1980

(Same as M-5-180C except for nacelle, engine and propeller.)

Engine	Lycoming T0-360-F1A6D, Carburetor parts listing No. IO-5258	
Fuel	100/100LL minimum grade aviation gasoline	
Engine limits	210 hp at 2575 rpm at 42.0 in. hg. MP, all operations	
Propeller and propeller limits	Hartzell constant speed model HC-E2YR-1BF/F8467-7R Diameter: Not over 77 in.; not under 76.5 in. Pitch settings at 30 in. sta.: low 15° \pm 0.1° high 30° to 33° Spinner: Hartzell spinner assembly A2298-2 Governor: Woodward C210681	
Airspeed limits (CAS)	<u>Landplane:</u>	(See NOTE 11)
	<u>Skiplane:</u>	(See NOTE 11)
C.G. range	<u>Landplane:</u>	(+15.0) to (+20.5) at 2300 lbs. (+12.0) to (+20.5) at 1700 lbs. or less
	<u>Skiplane:</u>	Fli-Lite 3000 MK IIIA Skis (+12.5) to (+20.0) at 2300 lbs. (+9.5) to (+20.0) at 1600 lbs. or less Straight line variation between points given.
Empty weight C.G. range	None	
Maximum weight	Landplane and Skiplane:	2300 lbs.
Number of seats	4 (2 at +20, 2 at +48.8)	
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)	
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) Optional wing auxiliary tanks 23 gal. (23 gal. usable; two 11.5 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)	
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)	
Maximum operating altitude	20,000 feet	
Control surface movements	Wing flaps	(s/n 9001C-9010C): Down 1st Notch 15° \pm 3° 2nd Notch 35° \pm 3° (s/n 9011C and up and airplanes modified per Maule SL#47): Down 1st Notch 20° \pm 3° 2nd Notch 40° \pm 3° Aileron Up 20° \pm 1° Down 20° \pm 1° Elevator Up 25° \pm 2° Down 21° \pm 1° Elevator tab Up 12° \pm 4° Down 29° \pm 2° Rudder Right 21° \pm 1° Left 21° \pm 1° Rudder tab Right 48° \pm 4° Left 48° \pm 4°
Serial numbers eligible	Model M-5-210TC, 9001C and up	
Production basis	(No longer in production)	

X. Model M-6-235, 4*PCLM (Normal Category), Approved June 25, 1981

(Same as M-5-235C except for wings, flaps, ailerons and flap control mechanism.)(*Optional 5th seat s/n's 7474C and up.)

Engine	Lycoming O-540-J1A5D, O-540-J3A5, IO-540-W1A5D, IO-540-W1A5 or O-540-B4B5
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	235 hp at 2400 rpm, all operations (O-540-J/O-540-W) 235 hp at 2575 rpm, all operations (O-540-B)
Propeller and propeller limits	(See NOTE 14)
Airspeed limits (CAS)	<u>Landplane:</u> (See NOTE 11) <u>Floatplane:</u> (See NOTE 11) <u>Skiplane:</u> (See NOTE 11)
C.G. range	<u>Landplane:</u> (+15.0) to (+20.5) at 2500 lbs. (+11.0) to (+20.5) at 1700 lbs. or less <u>Floatplane:</u> EDO 797-2500 amphibious* or 248B2440 Floats (+14.0) to (+19.0) at 2750 lbs. (+10.5) to (+19.0) at 1600 lbs. or less Aqua 2400 Floats (+14.8) to (+19.0) at 2530 lbs. (+10.5) to (+19.0) at 1600 lbs. or less <u>Skiplane:</u> FluiDyne A2500A Skis* (+14.3) to (+20.5) at 2300 lbs. (+11.0) to (+20.5) at 1700 lbs. or less Fli-Lite 3000 MK IIIA Skis* (+15.0) to (+20.5) at 2500 lbs. (+11.0) to (+20.5) at 1700 lbs. or less FluiDyne C2200H, C3000H/AH/M wheel Skis** (+15.0) to (+20.0) at 2500 lbs. (+10.0) to (+20.0) at 1700 lbs. or less Straight line variation between points given. *Not applicable s/n 7474C and up **Not applicable s/n 7466C, 7468C-7473C
Empty weight C.G. range	None
Maximum weight	<u>Landplane:</u> 2500 lbs. <u>Floatplane:</u> EDO 248B2440 or 797-2500: 2750 lbs. Aqua 2400: 2530 lbs. <u>Skiplane:</u> Fli-Lite 3000/C2200H/C3000H/AH/M: 2500 lbs. FluiDyne A2500A: 2300 lbs.
Number of seats	4 (2 at +20, 2 at +56) S/n 7474C and up: Optional: 5 (2 at +20.0, 2 at +53, 1 at +78)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)

Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) For S/n 7249C, 7356C-7472C w/ MK#27 and S/n 7473C and up: 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 26 gal. (26 gal. usable; two 13 gal. tanks in wings at +24) S/n 7473C and up: Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	IO-540-: 8 qt. (-34), 5 qt. minimum O-540: 12 qt. (-34), 9 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers	Model M-6-235, s/n 7249C, 7356C, 7379C-7444C, 7446C-7450C, 7452C-7459C, 7461C-7466C, 7468C, 7469C, 7471C-7475C, 7488C-7514C, 7516C-7519C and up
Production basis	Production Certificate No. 11S0

XI. Model M-6-180, 4 PCLM (Normal Category), Approved September 15, 1982

(Same as M-6-235, s/n 7249C-7472C, except for nacelle, engine and propeller.)

Engine	Lycoming O-360-C1F
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	180 hp at 2700 rpm, all operations
Propeller and propeller limits	Hartzell constant speed model HC-C2YR-1BF/F7666A Diameter: Not over 76 in; not under 72 in. Pitch settings at 30 in. sta.: low 12° high 27.8° to 29.8° Avoid continuous operation between 2000 and 2250 rpm. Spinner: Hartzell spinner assembly A2298-2 Governor: Woodward H210681 McCauley DC290D1(X)T12 or C290D3(X)/T29
Airspeed limits (CAS)	<u>Landplane:</u> (See NOTE 11)
C.G. range	<u>Landplane:</u> (+16.7) to (+20.5) at 2400 lbs. (+13.6) to (+20.5) at 1600 lbs. or less Straight line variation between points given.
Empty weight C.G. range	None
Maximum weight	<u>Landplane:</u> 2400 lbs.
Number of seats	4 (2 at +20, 2 at +56)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) Optional wing auxiliary tanks 26 gal. (26 gal. usable; two 13 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers eligible	Model M-6-180, s/n 8020C, 8065C-8067C and up

Production basis Production Certificate No. 11S0

XII. Model M-5-200, 4 PCLM (Normal Category), Approved October 29, 1982

(Same as M-5-235C except for nacelle, engine and propeller.)

Engine	Lycoming IO-360-J1A6D		
Fuel	100/100LL minimum grade aviation gasoline		
Engine limits	200 hp at 2700 rpm, all operations		
Propeller and propeller limits	Hartzell constant speed model HC-E2YR-1BF/F8467-7R Diameter: Not over 77 in.; not under 76.5 in. Pitch settings at 30 in. sta.: low 12° high 30° to 33° Do not exceed 24 in. manifold pressure below 2350 rpm. Spinner: Hartzell spinner assembly A2298-2P Governor: Woodward K210681		
Airspeed limits (CAS)	<u>Landplane:</u>	(See NOTE 11)	
C.G. range	<u>Landplane:</u>	(+16.7) to (+20.5) at 2500 lbs. (+13.2) to (+20.5) at 1700 lbs. or less Straight line variation between points given.	
Empty weight C.G. range	None		
Maximum weight	2500 lbs.		
Number of seats	4 (2 at +20, 2 at +56)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)		
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) Optional wing auxiliary tanks 23 gal. (23 gal. usable; two 11.5 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)		
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	Wing flaps	Down	1st Notch 20° ±3° 2nd Notch 40° ±3°
	Aileron	Up 20° ±1°	Down 20° ±1°
	Elevator	Up 25° ±2°	Down 21° ±1°
	Elevator tab	Up 8° to 16°	Down 29° ±2°
	Rudder	Right 21° ±1°	Left 21° ±1°
	Rudder tab	Right 48° ±4°	Left 48° ±4°
Serial numbers eligible	Model M-5-200, s/n 8015C, 8022C		
Production basis	(No longer in production.)		

XIII. Model M-7-235, 5 PCLM (Normal Category) Approved November 9, 1983

(Same as M-6-235 except for fuselage, wings, flaps, ailerons, and rudder.)

Engine	Lycoming	O-540-J1A5D, O-540-J3A5, IO-540-W1A5D, IO-540-W1A5 or O-540-B4B5
Fuel	100/100LL minimum grade aviation gasoline	

Engine limits	235 hp at 2400 rpm, all operations (O-540-J/IO-540-W) 235 hp at 2575 rpm, all operations (O-540-B)
Propeller and propeller limits	(See NOTE 14)
Airspeed limits (CAS)	<u>Landplane:</u> (See NOTE 11) <u>Floatplane:</u> (See NOTE 11) <u>Skiplane:</u> (See NOTE 11)
C.G. range	<u>Landplane:</u> (+15.0) to (+20.0) at 2500 lbs. (+12.5) to (+20.0) at 1700 lbs. or less <u>Floatplane:</u> See appropriate Airplane Flight Manual Supplement (AFMS) for C.G. range for different float installations. <u>Skiplane:</u> See appropriate AFMS for C.G. range for different ski installations.
Maximum weight	<u>Landplane:</u> 2500 lbs. <u>Floatplane:</u> 2750 lbs. <u>Skiplane:</u> 2500 lbs.
Number of seats	5(2 at +20, 2 at +53, 1 at +83)
Empty weight C.G. range	None
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+72)
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	IO-540: 8 qt. (-34), 5 qt. minimum O-540: 12 qt. (-34), 9 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers eligible	Model M-7-235, s/n 4001C and up; With STC SA2661SO, s/n 12001C and up (also known as Model M-7-420)
Production basis	Production Certificate No. 11S0

XIV. Model **MX-7-235**, 4/5 PCLM (Normal Category), Approved October 18, 1984

(Same as M-6-235 except for wings, flaps, aileron and wing tip.)

Engine	Lycoming	O-540-J1A5D, O-540-J3A5, IO-540-W1A5D, IO-540-W1A5 or O-540-B4B5
Fuel	100/100LL minimum grade aviation gasoline	
Engine limits	235 hp at 2400 rpm, all operations (O-540-J/IO-540-W) 235 hp at 2575 rpm, all operations (O-540-B)	
Propeller and propeller limits	(See NOTE 14)	

Airspeed limits (CAS)	<u>Landplane:</u> (See NOTE 11) <u>Floatplane:</u> (See NOTE 11) <u>Skiplane:</u> (See NOTE 11)
C.G. range	<u>Landplane:</u> (+15.0) to (+20.5) at 2500 lbs. (+12.0) to (+20.5) at 1700 lbs. or less <u>Floatplane:</u> EDO 797-2500 amphibious or 248B2440: (+14.3) to (+19.0) at 2750 lbs. (+12.3) to (+19.0) at 2100 lbs. or less Straight line variation between points given. <u>Skiplane:</u> FluiDyne C3000H: (+15.0) to (+19.0) at 2500 lbs. (+11.0) to (+19.0) at 1840 lbs. or less FliLite 3000 MK IIIA: (+15.0) to (+19.0) at 2500 lbs. (+11.0) to (+19.0) at 1700 lbs. or less
Empty weight C.G. range	None
Maximum weight	Landplane: 2500 lbs. Floatplane: 2750 lbs. Skiplane: 2500 lbs.
Number of seats	4 (2 at +20, 2 at +56) Optional: 5 (2 at +20, 2 at +53, 1 at +78)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	IO-540: 8 qt. (-34), 5 qt. minimum O-540: 12 qt. (-34), 9 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers eligible	Model MX-7-235, s/n 10001C and up
Production basis	Production Certificate No. 11S0

XV. Model MX-7-180, 4/5 PCLM (Normal Category), Approved December 18, 1984

(Same as MX-7-235 except for nacelle, engine and propeller.)

Engine	Lycoming O-360-C1F
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	180 hp at 2700 rpm, all operations

Propeller and propeller limits	Hartzell constant speed model HC-C2YR-1BF/F7666A Diameter: Not over 76 in., not under 72 in. Pitch settings at 30 in. sta.: low 12° high 27.8° to 29.8° Spinner: Hartzell spinner assembly A2298-2 Governor: Woodward H210681 McCauley C290D3(X)/T29 or DC290D1(X)/T12		
Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed	185 mph (161 knots)
		Max. structural cruising	149 mph (129 knots)
		Maneuvering	129 mph (112 knots)
		Flaps extended	98 mph (85 knots)
C.G. range	<u>Landplane:</u>	(+16.7) to (+20.5) at 2500 lbs. (+13.6) to (+20.5) at 1600 lbs. or less Straight line variation between points given.	
Empty weight C.G. range	None		
Maximum weight	2500 lbs.		
Number of seats	4 (2 at +20, 2 at +56) Optional: 5 (2 at +20, 2 at +53, 1 at +78)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)		
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)		
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	(See NOTE 12)		
Serial numbers eligible	Model MX-7-180, s/n 11001C and up		
Production basis	Production Certificate No. 11S0		
XVI.	Model MX-7-420 , 4/5 PCLM (Normal Category) Approved June 1, 1989		
(Same as MX-7-235 except for nacelle, engine, propeller and rudder.)			
Engine	Allison Gas Turbine 250-B17C		
Fuel	Primary:	Mil-T-5624L, grade JP-4 and JP-5, Mil-T-83133A, grade JP-8, ASTM-D-1655, Jet A, A1 or B, JP-1 Fuel conforming to ASTM-D-1655, Jet A, Artic Diesel Fuel DF-A (VV0F800B) conforming to ASTM-D-1655, Jet A or A1 Diesel #1 fuel conforming to ASTM-D-1655, Jet A	
	Emergency:	Mil-G-5572, all grades (aircraft boost pump on; maximum of 6 hours operation per overhaul period of turbine through an engine operating range of idle to 90% maximum SHP)	
	Cold Weather:	To assure consistent starts below 4°C (40°F), the following fuels may be necessary: MIL-T-5624, grade JP-4 ASTM-D-1655, Jet B AVGAS/Jet A, Jet A1 or Jet JP-5 mixture. (Refer to Cold Weather Fuels, para 2-48, for mixing/use of cold weather fuel in Allison Manual 11W2.)	
Engine limits	369 hp - 90 psi torque, at 2030 rpm continuous		
Propeller and	Hartzell, constant speed, full-feathering beta, model		

propeller limits	HC-B3TF-7A/T10173F-21R Diameter: 80.5 - 78 inches Pitch settings at 30" sta.: Reverse pitch -15° ±5° feather 81.1° ±5° Spinner: Hartzell spinner assembly A3640P	
Maximum operating altitude	20,000 feet	
Airspeed limits (CAS)	Maximum operating	151 mph (131 knots)
	Maximum structural cruising	145 mph (126 knots)
	Maneuvering	121 mph (105 knots)
	Flaps extended	94 mph (82 knots)
C.G. range	<u>Landplane:</u> (+15.0) to (+20.0) at 2500 lbs. (+12.0) to (+20.0) at 1700 lbs. or less <u>Floatplane:</u> Wipline 2350 Amphibious: (+14.1) to (+18.5) at 2500 lbs. (+12.6) to (+18.5) at 2090 lbs. or less Straight line variation between points given.	
Empty weight		
C.G. range	None	
Maximum weight	2500 lbs.	
Number of seats	4 (2 at +20, 2 at +56) Optional: 5 (2 at +20, 2 at +53, 1 at +78)	
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)	
Fuel capacity	43 gal. (40.6 usable; two 21.5 gal. tanks in wings at +24-considered one tank) or 47.6 gal. (43 gal. usable, two 23.8 gal. tanks in wings at +24 - considered one tank) Optional wing auxiliary tanks, 30 gal. (30 usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 usable; two 21 gal. tanks in wings at +24). (See NOTE 1 for data on system fuel.)	
Oil capacity	10 qt. (-22.5), 9 qts. minimum (See NOTE 1 for data on system oil.)	
Control surface movements	(See NOTE 12)	
Serial numbers eligible	Model MX-7-420, s/n 13001C and up	
Production basis	Production Certificate No. 11S0	

XVII. Model MXT-7-180, 4/5 PCLM (Normal Category), Approved November 9, 1990

(Same as M-6-235, s/n 7474C and up, except for nacelle, engine, propeller, ailerons, flaps and landing gear (aluminum spring mains with nosewheel in lieu of tailwheel).)

Engine	Lycoming O-360-C1F
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	180 hp at 2700 rpm, all operations
Propeller and propeller limits	Hartzell constant speed model HC-C2YR-1BF/7666A Diameter: Not over 76 in., not under 72 in. Pitch settings at 30 in. sta.: low 12° high 27.8° to 29.8° Avoid continuous operation between 2000 and 2250 rpm.

	McCauley constant speed 3-blade model B3D32C414-C/G-82NDA-8 Diameter: 74 in. Pitch settings at 30" sta: low 10.6° ±0.2° high 27.5° ±0.5° Avoid continuous operation below 10 inches HG between 1900 and 2300 rpm. Spinner: Hartzell spinner assembly A2298-2 (use with Hartzell propeller only) McCauley spinner assembly D-6240 (use with McCauley propeller only) Governor: Woodward H210681 McCauley C290D3(X)/T29 or DC290D1(X)/T12		
Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed Maximum structural cruising Maneuvering Flaps extended	182 mph (158 knots) 147 mph (128 knots) 129 mph (112 knots) 95 mph (83 knots)
C.G. range	<u>Landplane:</u>	(+15.9) to (+20.5) at 2500 lbs. (+12.4) to (+20.5) at 1740 lbs. or less Straight line variation between points given.	
Empty weight C.G. range	None		
Maximum weight	Landplane: 2500 lbs.		
Number of seats	4 (2 at +20, 2 at +56) Optional: 5 (2 at +20, 2 at +53, 1 at +78)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)		
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)		
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	(See NOTE 12)		
Serial numbers eligible	Model MXT-7-180, s/n 14000C and up		
Production basis	Production Certificate No. 11S0		

XVIII. Model MT-7-235, 5 PCLM (Normal Category), Approved March 20, 1992

 (Same as MXT-7-180 except for nacelle, engine, propeller and M-7 fuselage.)

Engine	Lycoming IO-540-W1A5D, IO-540-W1A5
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	235 hp at 2400 rpm, full throttle continuous
Propeller and propeller limits	Hartzell constant speed model HC-C2YR-1BF/8468A-6R or -3R Diameter: -3R: Not over 81 in.; not under 77 in. -6R: Not over 78 in.; not under 77 in. Pitch settings at 30" sta.: -3R: low $16^{\circ} \pm 1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$ -6R: low $16.7^{\circ} \pm 1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$ -6R: Do not exceed 23 in. M.P. below 2050 rpm.

	McCauley constant speed model B3D32C414-C/G-82NDA-4 or -2
	McCauley constant speed model B2D37C-224-B/G-90RA-9
	Pitch settings at 30" sta:
	-2 (80"): low 15.0° \pm 0.2° high 30.0° \pm 0.5°
	-4 (78"): low 15.7° \pm 0.2° high 30.0° \pm 0.5°
	-9 (81"): low 14.7° \pm 0.2° high 24.6° \pm 0.5°
	Spinner: Hartzell spinner assembly A2298-2 (use with Hartzell 2 blade propeller only) McCauley spinner assembly D-6240 (use with McCauley 3 blade propeller only) McCauley spinner assembly D-6195 (use with McCauley 2 blade propeller only)
	Governor: Woodward F210681 or B210761 McCauley C290D3(X)/T30 or DC290D1(X)/T14
Airspeed limits (IAS)	<u>Landplane:</u> Never exceed 182 mph (158 knots) Maximum structural cruising 147 mph (128 knots) Maneuvering 129 mph (112 knots) Flaps extended 95 mph (83 knots)
	<u>Floatplane:</u> (See NOTE 11)
C.G. range	<u>Landplane:</u> (+15.0) to (+20.5) at 2500 lbs. (+12.0) to (+20.5) at 1800 lbs. or less Straight line variation between points given.
Empty weight C.G. range	<u>Floatplane:</u> See appropriate AFMS for C.G. range for different float installations. None
Maximum weight	Landplane: 2500 lbs. Floatplane: 2750 lbs.
Number of seats	5 (2 at +20, 2 at +53, 1 at +83)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+72)
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	8 qt. (-34), 5 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers eligible	Model MT-7-235, s/n 18001C and up
Production basis	Production Certificate No. 11S0

XIX. Model M-8-235, 4/5 PCLM (Normal Category), Approved August 10, 1992

(Same as M-6-235, s/n 7474C & up, except for flaps, ailerons and landing gear (aluminum spring mains.)

Engine	Lycoming O-540-J1A5D, O-540-J3A5, IO-540-W1A5D, IO-540-W1A5 or O-540-B4B5
Fuel	100/100LL minimum grade aviation gasoline

Engine limits	235 hp at 2400 rpm, all operations (O-540-J/IO-540-W) 235 hp at 2575 rpm, all operations (O-540-B)
Propeller and propeller limits	(See NOTE 14)
Airspeed limits (CAS)	<u>Landplane:</u> (See NOTE 11)
C.G. range	<u>Landplane:</u> (+15.0) to (+20.5) at 2500 lbs. (+12.0) to (+20.5) at 1760 lbs. or less Straight line variation between points given.
Empty weight	
C.G. range	None
Maximum weight	Landplane: 2500 lbs.
Number of seats	4 (2 at +20, 2 at +56) Optional: 5 (2 at +20, 2 at +53, 1 at +78)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	IO-540: 8 qt. (-34), 5 qt. minimum O-540: 12 qt. (-34), 9 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers eligible	Model M-8-235, s/n 15001C and up
Production basis	Production Certificate No. 11S0

XX. Model MX-7-160, 4 PCLM (Normal Category), Approved November 13, 1992

(Same as MXT-7-180, except for engine, propeller, and has conventional tailwheel landing gear.)

Engine	Lycoming O-320-B2D
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	160 hp at 2700 rpm, full throttle continuous
Propeller and propeller limits	Sensenich fixed pitch 74DM7S5-0-52 or -54 or -56 (74" Dia.) or Sensenich fixed pitch 74DM7S8-0-52 or -54 or -56 (74" Dia.) Diameter: Not over 74 in., not under 72 in., no further reduction permitted. Static rpm at full throttle: Not over 2500 rpm, not under 2400 rpm (-54 or -56) Not over 2620 rpm, not under 2520 rpm (-52) Spinner: Sensenich spinner assembly C2346
Airspeed limits (IAS)	<u>Landplane:</u> Never exceed 180 mph (156 knots) Max. structural cruising 147 mph (128 knots) Maneuvering 125 mph (109 knots) Flaps extended 95 mph (82 knots)
C.G. range	<u>Landplane:</u> (+15.4) to (+20.5) at 2200 lbs. (+12.5) to (+20.5) at 1600 lbs. or less Straight line variation between points given.
Empty weight	

C.G. range	None
Maximum weight	2200 lbs.
Number of seats	4 (2 at +20, 2 at +56)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers eligible	Model MX-7-160, s/n 19001C and up
Production basis	Production Certificate No. 11S0

XXI. Model MXT-7-160, 2/4 PCLM (Normal Category), Approved November 13, 1992

(Same as MXT-7-180, except for engine and propeller.)

Engine	Lycoming O-320-B2D
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	160 hp at 2700 rpm, full throttle continuous
Propeller and propeller limits	Sensenich fixed pitch 74DM7S5-0-52 or -54 or -56 (74" Dia.) or Sensenich fixed pitch 74DM7S8-0-52 or -54 or -56 (74" Dia.) Diameter: Not over 74 in., not under 72 in., no further reduction permitted. Static rpm at full throttle: Not over 2500 rpm, not under 2400 rpm (-54 or -56) Not over 2620 rpm, not under 2520 rpm (-52) Spinner: Sensenich spinner assembly C-2346
Airspeed limits (IAS)	<u>Landplane:</u> Never exceed 180 mph (156 knots) Max. structural cruising 147 mph (128 knots) Maneuvering 125 mph (109 knots) Flaps extended 95 mph (82 knots)
C.G. range	<u>Landplane:</u> (+15.4) to (+20.5) at 2200 lbs. (+13.2) to (+20.5) at 1600 lbs. or less Straight line variation between points given.
Empty weight	
C.G. range	None
Maximum weight	2200 lbs.
Number of seats	2 (2 at +20) Optional: 4 (2 at +20, 2 at +56)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)

Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wing at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers eligible	Model MXT-7-160, s/n 17001C and up
Production basis	Production Certificate No. 11S0

XXII. Model **MX-7-180A, 4 PCLM (Normal Category), Approved June 3, 1993**

(Same as MXT-7-180, except for engine, propeller, and has conventional tailwheel landing gear.)

Engine	Lycoming O-360-C1F or O-360-C4F
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	180 hp at 2700 rpm, full throttle continuous
Propeller and propeller limits	Sensenich fixed pitch 76EM8S5-0-56 (76" Dia.) or 76EM8S8-0-56 (76" Dia.) Diameter: Not over 76 in., not under 76 in., no further reduction permitted. Static rpm at full throttle: Not over 2500 rpm, not under 2400 rpm. Spinner: Sensenich spinner assembly C2346
Airspeed limits (IAS)	<u>Landplane:</u> Never exceed 185 mph (161 knots) Max. structural cruising 149 mph (129 knots) Maneuvering 125 mph (109 knots) Flaps extended 98 mph (85 knots)
C.G. range	<u>Landplane:</u> (+15.9) to (+20.5) at 2400 lbs. (+12.4) to (+20.5) at 1740 lbs. or less Straight line variation between points given.
Empty weight C.G. range	None
Maximum weight	2400 lbs.
Number of seats	4 (2 at +20, 2 at +56)
Maximum baggage	170 lbs. at (+20), 350 lbs. (+42), 250 lbs. (+70)
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wing at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers eligible	Model MX-7-180A, s/n 20001C and up

Production basis Production Certificate No. 11S0

XXIII. Model MXT-7-180A, 4 PCLM (Normal Category), Approved June 3, 1993

(Same as MXT-7-180, except for engine and propeller.)

Engine	Lycoming 0-360-C1F or 0-360-C4F		
Fuel	100/100LL minimum grade aviation gasoline		
Engine limits	180 hp at 2700 rpm, full throttle continuous		
Propeller and propeller limits	Sensenich fixed pitch 76EM8S5-0-56 (76" Dia.) or 76EM8S8-0-56 (76" Dia.) Diameter:Not over 76 in., not under 76 in., no further reduction permitted. Static rpm at full throttle: Not over 2500 rpm, not under 2400 rpm. Spinner: Sensenich spinner assembly C-2346		
Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed	185 mph (161 knots)
		Max. structural cruising	149 mph (129 knots)
		Maneuvering	125 mph (109 knots)
		Flaps extended	98 mph (85 knots)
C.G. range	<u>Landplane:</u>	(+15.9) to (+20.5) at 2400 lbs. (+12.4) to (+20.5) at 1740 lbs. or less Straight line variation between points given.	
Empty weight C.G. range	None		
Maximum weight	2400 lbs.		
Number of seats	4 (2 at +20, 2 at +56)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)		
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)		
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	(See NOTE 12)		
Serial numbers eligible	Model MXT-7-180A, s/n 21001C and up		
Production basis	Production Certificate No. 11S0		

XXIV. Model MX-7-180B, 4/5 PCLM (Normal Category), Approved July 12, 1993

(Same as MXT-7-180 except for conventional tailwheel landing gear.)

Engine	Lycoming 0-360-C1F		
Fuel	100/100LL minimum grade aviation gasoline		
Engine limits	180 hp at 2700 rpm, full throttle continuous		
Propeller and propeller limits	Hartzell constant speed HC-C2YR-1BF/F7666A (76" Dia.) Diameter: Not over 76 in., not under 72 in., no further reduction permitted.		

	Pitch settings at 30 in. sta.: low 12° high 27.8° to 29.8° Avoid continuous operation between 2000 and 2250 rpm. Spinner: Hartzell spinner assembly A2298-2 Governor: Woodward H210681 McCauley C290D3(X)/T29 or DC290D1(X)/T12	
Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed 185 mph (161 knots) Max. structural cruising 149 mph (129 knots) Maneuvering 125 mph (109 knots) Flaps extended 98 mph (85 knots)
	<u>Floatplane:</u>	(See NOTE 11)
C.G. range	<u>Landplane:</u>	(+15.9) to (+20.5) at 2500 lbs. (+12.4) to (+20.5) at 1740 lbs. or less Straight line variation between points given.
	<u>Floatplane:</u>	See appropriate AFMS for C.G. range for different float installations.
Empty weight		
C.G. range		None
Maximum weight		2500 lbs.
Number of seats		4 (2 at +20, 2 at +56) Optional: 5 (2 at +20, 2 at +53, 1 at +78)
Maximum baggage		170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)
Fuel capacity		43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity		8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements		(See NOTE 12)
Serial numbers eligible		Model MX-7-180B, s/n 22001C and up
Production basis		Production Certificate No. 11S0
XXV. Model MXT-7-420, 4/5 PCLM (Normal Category), Approved July 12, 1993 (Same as MXT-7-180 except for nacelle, engine, propeller.)		
Engine		Allison Gas Turbine 250-B17C
Fuel	Primary:	Mil-T-5624L, grade JP-4 and JP-5, Mil-T-83133A, grade JP-8 ASTM-D-1655, Jet A, A1 or B, JP-1 Fuel conforming to ASTM-D-1655, Jet A, Artic Diesel Fuel DF-A (VV0F800B) conforming to ASTM-D-1655, Jet A or A1 Diesel #1 fuel conforming to ASTM-D-1655, Jet A
	Emergency:	Mil-G-5572, all grades (aircraft boost pump on; maximum of 6 hours operation per overhaul period of turbine through an engine operating range of idle to 90% maximum SHP)
	Cold Weather:	To assure consistent starts below 4°C (40°F), the following fuels may be necessary: MIL-T-5624, grade JP-4 ASTM-D-1655, Jet B AVGAS/Jet A, Jet A1 or Jet JP-5 mixture. (Refer to Cold Weather Fuels, para 2-48, for mixing/use of cold weather fuel in Allison Manual 11W2.)
Engine limits		369 hp - 90 psi torque, at 2030 rpm continuous
Propeller and		Hartzell, constant speed, full-feathering beta, model

propeller limits	HC-B3TF-7A/T10173F-21R Diameter: 80.5 - 78 inches Pitch settings at 30" sta.: Reverse pitch -15° ±5° feather 81.1° ±5° Spinner: Hartzell spinner assembly A3640P Maximum operating altitude 20,000 feet		
Airspeed limits (IAS)	Maximum operating	151 mph (131 knots)	
	Maximum structural		
	cruising	145 mph (126 knots)	
	Maneuvering	121 mph (105 knots)	
	Flaps extended	94 mph (82 knots)	
C.G. range	(+16.0) to (+20.5) at 2500 lbs. (+13.0) to (+20.5) at 1700 lbs. or less Straight line variation between points given.		
Empty weight			
C.G. range	None		
Maximum weight	2500 lbs.		
Number of seats	4 (2 at +20, 2 at +56) Optional: 5 (2 at +20, 2 at +53, 1 at +78)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)		
Fuel capacity	43 gal. (40.6 usable; two 21.5 gal. tanks in wings at +24 - considered one tank) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks, 30 gal. (30 usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)		
Oil capacity	10 qts. (-22.5), 9 qts. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	(See NOTE 12)		
Serial numbers eligible	Model MXT-7-420, s/n 16001C and up		
Production basis	None. Prior to original certification of each aircraft, an FAA representative must perform a detailed inspection for workmanship, materials, and conformity to the approved technical data and a check of the flight characteristics.		

XXVI. Model M-7-235B, 5 PCLM (Normal Category), Approved October 14, 1993

(Same as MT-7-235 except has conventional tailwheel landing gear.)

Engine	Lycoming	O-540-J1A5D, O-540-J3A5, IO-540-W1A5D, IO-540-W1A5 or O-540-B4B5
Fuel	100/100LL minimum grade aviation gasoline	
Engine limits	235 hp at 2400 rpm, all operations (O-540-J/IO-540-W) 235 hp at 2575 rpm, all operations (O-540-B)	
Propeller and propeller limits	(See NOTE 14)	
Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed
		Max. structural
		cruising
		Maneuvering
		Flaps extended
		182 mph (158 knots)
		147 mph (128 knots)
		125 mph (109 knots)
		95 mph (83 knots)

	<u>Floatplane:</u>	(See NOTE 11)
C.G. range	<u>Landplane:</u>	(+15.0) to (+20.0) at 2500 lbs. (+12.5) to (+20.0) at 1700 lbs. or less
	<u>Floatplane:</u>	See appropriate AFMS for C.G. range for different float installations.
Empty weight C.G. range	None	
Maximum weight	Landplane:	2500 lbs.
	Floatplane:	2750 lbs.
Number of seats		5 (2 at +20, 2 at +53, 1 at +83)
Maximum baggage		170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+72)
Fuel capacity		43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity		IO-540: 8 qt. (-34), 5 qt. minimum O-540: 12 qt. (-34), 9 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements		(See NOTE 12)
Serial numbers eligible		Model M-7-235B, s/n 23001C and up
Production basis		Production Certificate No. 11S0

XXVII. Model M-7-235A, 5 PCLM (Normal Category) Approved March 10, 1994

(Same as M-7-235 except for flaps and ailerons.)

Engine	Lycoming	O-540-J1A5D, O-540-J3A5, IO-540-W1A5D, IO-540-W1A5, or O-540-B4B5
Fuel		100/100LL minimum grade aviation gasoline
Engine limits		235 hp at 2400 rpm, all operations (O-540-J/IO-540-W) 235 hp at 2575 rpm, all operations (O-540-B)
Propeller and propeller limits		(See NOTE 14)
Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed 182 mph (158 knots) Max. structural cruising 147 mph (128 knots) Maneuvering 125 mph (109 knots) Flaps extended 95 mph (83 knots)
	<u>Floatplane:</u>	(See NOTE 11)
C.G. range	<u>Landplane:</u>	(+15.0) to (+20.0) at 2500 lbs. (+12.5) to (+20.0) at 1700 lbs. or less Straight line variation between points given.
Empty weight	<u>Floatplane:</u>	See appropriate AFMS for C.G. range for different float installations.

C.G. range	None
Maximum weight	Landplane: 2500 lbs. Floatplane: 2750 lbs.
Number of seats	5 (2 at +20, 2 at +53, 1 at +83)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+72)
Fuel capacity	43 gal. (40 gal. usable; two 21.5 gal. tanks in wings at +24) or 47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system oil.)
Oil capacity	IO-540: 8 qt. (-34), 5 qt. minimum O-540: 12 qt. (-34), 9 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movement	(See NOTE 12)
Serial numbers eligible	Model M-7-235A, s/n 24001C and up
Production basis	Production Certificate No. 11S0

XXVIII. Model M-7-235C, 5 PCLM (Normal Category) Approved October 10, 1995

(Same as M-7-235B except spring aluminum main landing gear.)

Engine	Lycoming: O-540-J1A5D, O-540-J3A5, IO-540-W1A5D, IO-540-W1A5 or O-540-B4B5		
Fuel	100/100LL minimum grade aviation gasoline		
Engine Limits	235 hp at 2400 rpm, all operations (O-540-J/IO-540-W/ O-540-W) 235 hp at 2575 rpm, all operations (O-540-B)		
Propeller and propeller limits	(See NOTE 14)		
Airspeed limits (IAS)	<u>Landplane:</u>	Never Exceed	182 mph (158 knots)
		Max. structural cruising	147 mph (128 knots)
		Maneuvering	125 mph (109 knots)
		Flaps extended	95 mph (83 knots)
	<u>Floatplane:</u>	(See NOTE 11)	
C.G. range	<u>Landplane:</u>	(+15.0) to (+20.5) at 2500 lbs. (+12.0) to (+20.5) at 1760 lbs. or less	
	<u>Floatplane:</u>	See appropriate AFMS for C.G. range for different float installations.	
Empty weight C.G. range	None		
Maximum weight	Landplane:	2500 lbs.	
	Floatplane:	2750 lbs.	
Number of seats	5 (2 at +20, 2 at +53, 1 at +83)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+72)		

Fuel capacity	47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) or 43.0 gal. (40 gal. usable; two 21.5 gal. tanks in wing at +24) Optional wing auxiliary tanks: 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on fuel system.)
Oil capacity	IO-540: 8 qt. (-34), 5 qt. minimum O-540: 12 qt. (-34), 9 qt. minimum (See NOTE 1 for data on oil system.)
Control surface movement	(See NOTE 12)
Serial numbers eligible	Model M-7-235C, s/n 25001C and up.
Production basis	Production Certificate No. 11SO

XXIX. Model MX-7-180C, 4/5 PCLM (Normal Category) Approved August 27, 1996

(Same as MX-7-180B except for landing gear (aluminum spring mains))

Engine	Lycoming O-360-C1F		
Fuel	100/100LL minimum grade aviation gasoline		
Engine limits	180 hp at 2700 rpm, Full Throttle continuous		
Propeller and Propeller limits	Hartzell constant speed HC-C2YR-1BF/F7666A (76") Diameter: Not over 76 in., not under 72 in., no further reduction permitted Pitch settings at 30 in. sta.: low 12° high 27.8° to 29.8° Avoid continuous operation between 2000 and 2250 rpm. Spinner: Hartzell spinner assembly A2298-2 Governor: Woodward H210681 McCauley C290D3(X)/T29 or DC290D1(X)/T12		
Airspeed limits (IAS)	<u>Landplane:</u>	Never Exceed Max. structural cruising Maneuvering Flaps extended	185 mph (161 knots) 149 mph (129 knots) 125 mph (109 knots) 98 mph (85 knots)
	<u>Floatplane:</u>	(See NOTE 11)	
C.G. range	<u>Landplane:</u>	(+15.9) to (+20.5) at 2500 lbs. (+12.4) to (+20.5) at 1740 lbs. or less Straightline variation between points given.	
	<u>Floatplane:</u>	See appropriate AFMS for C.G. range for different float installations.	
Empty weight C.G. range	None		
Maximum weight	2500 lbs.		
Number of seats	4 (2 at +20, 2 at +53) Optional: 5 (2 at +20, 2 at +50, 1 at +78)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+72)		
Fuel capacity	47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) or		

	43.0 gal. (40 gal. usable; two 21.5 gal. tanks in wing at +24) Optional wing auxiliary tanks: 30 gal. (30 gal. usable: two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable: two 21 gal. tanks in wings at +24) (See NOTE 1 for data on fuel system.)
Oil capacity	8 qt. (-36.5), 5 qt. minimum
Control surface movement	(See NOTE 12)
Serial numbers eligible	MX-7-180C, s/n 28001C and up
Production basis	Production certificate No. 11SO

XXX. Model M-7-260, 5 PCLM (Normal Category) Approved April 17, 1998

(Same as M-7-235B except engine and propeller.)

Engine	Lycoming IO-540-V4A5
Fuel	100/100LL minimum grade aviation gasoline
Engine Limits	260 hp at 2700 rpm, full throttle continuous
Propeller and Propeller limits	<p>MT-Propeller 4 Blade Model MTV-14-B/190-17 Diameter: not over 75 in.; not under 69 in. Pitch settings at 26.18 in. sta.: low $12.0^{\circ} \pm 0.2^{\circ}$; high $32.0^{\circ} \pm 1^{\circ}$ Hartzell - constant speed 2-blade model HC-C2YR-1BF/F8477D-6 Hartzell - constant speed 3-blade model HC-C3YR-1RF/F7693(F) and (F)-2 Diameter: not over 78 in.; not under 76 in. Pitch settings at 30 in. sta.: F8477D-6: low $13.5^{\circ} \pm 0.1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$ F7693: low $12.0^{\circ} \pm 0.2^{\circ}$ high $31^{\circ} \pm 1^{\circ}$ McCauley - constant speed 2-blade model B2D37C224/90RA-12 McCauley - constant speed 3-blade model B3D32C414/82NDA-4 Diameter: -12: not over 78 in.; not under 78 in. -4: not over 78 in.; not under 78 in. Pitch settings at 30 in. sta.: -12: low $13.4^{\circ} \pm 0.2^{\circ}$ high $29.5^{\circ} \pm 0.5^{\circ}$ -4: low $14.0^{\circ} \pm 0.2^{\circ}$ high $30.0^{\circ} \pm 0.5^{\circ}$</p> <p>Spinner: MT-Propeller spinner assembly P-238-A-1 (use with MT-Propeller only) Hartzell spinner assembly A2298-2 (use with Hartzell 2-blade prop only) Hartzell spinner assembly C-3535-1P (use with Hartzell 3-blade prop only) McCauley spinner assembly D-6195 (use with McCauley 2-blade prop only) McCauley spinner assembly D-6240 (use with McCauley 3-blade prop only) Governor: McCauley DC290D1(X)/T33</p>

Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed Maximum structural cruising Maneuvering Flaps extended	182 mph (158 knots) 147 mph (128 knots) 125 mph (109knots) 95 mph (83 knots)
	<u>Floatplane:</u>	(See NOTE 11)	
C. G. range	<u>Landplane:</u>	(+15.0) to (+20.0) at 2500 lbs. (+12.5) to (+20.0) at 1700 lbs. or less	
	<u>Floatplane:</u>	Wipline 3000 Amphibious: (+14.0) to (+19.0) at 2750 lbs. (+12.0) to (+19.0) at 2100 lbs. or less	
Empty weight			
C.G. range	None		
Maximum weight	Landplane: 2500 lbs. Floatplane: 2750 lbs.		
Number of seats	5 (2 at +20, 2 at +53, 1 at +83)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+72)		
Fuel capacity	47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wing at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on fuel system.)		
Oil capacity	IO-540: 8 qt. (-34), 5 qt. minimum (See NOTE 1 for data on oil system.)		
Control surface movement	(See NOTE 12)		
Serial numbers eligible	Model M-7-260, S/N 26001C and up		
Production basis	Production Certificate No. 11SO		

XXXI. Model MT-7-260, 5 PCLM (Normal Category) Approved April 17, 1998

(Same as MT-7-235 except engine and propeller.)

Engine	Lycoming IO-540-V4A5
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	260 hp at 2700 rpm, full throttle continuous
Propeller and propeller limits	MT-Propeller constant speed 4 blade Model MTV-14-B/190-17 Diameter: Not over 75 in.; not under 69 in. Pitch settings at 26.18 in. sta.: low $12.0^\circ \pm 0.2^\circ$, high $32^\circ \pm 1^\circ$ Hartzell constant speed 2 blade Model HC-C2YR-1BF/F8477D-6 Diameter: Not over 78 in.; not under 76 in. Pitch settings at 30 in. sta.: low $13.5^\circ \pm 0.1^\circ$ high $30^\circ \pm 1^\circ$ McCauley constant speed 2 blade Model B2D37C224/90RA-12 McCauley constant speed 3 blade Model B3D32C414/82NDA-4 Diameter: -12: Not over 78 in.; not under 78 in. -4: Not over 78 in.; not under 78 in. Pitch Settings at 30 in. sta.: -12: low $13.4^\circ \pm 0.2^\circ$ high $29.5^\circ \pm 0.5^\circ$ -4: low $14.0^\circ \pm 0.2^\circ$ high $30.0^\circ \pm 0.5^\circ$ Spinner:

MT-Propeller spinner assembly P-238-A-1 (use with MT Propeller only)
Hartzell spinner assembly A2298-2 (use with Hartzell 2 blade prop only)
Hartzell spinner assembly C-3535-IP (use with Hartzell 3 blade prop only)
McCauley spinner assembly D-6195 (use with McCauley 2 blade prop only)
McCauley spinner assembly D-6240 (use with McCauley 3 blade prop only)
Governor: McCauley DC290D1(X)/T33

Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed Maximum structural cruising Maneuvering Flaps extended	182 mph (158 knots) 147 mph (128 knots) 125 mph (109 knots) 95 mph (83 knots)
	<u>Floatplane:</u>	(See NOTE 11)	
C. G. range	<u>Landplane:</u>	(+15.0) to (+20.0) at 2500 lbs. (+12.5) to (+20.0) at 1700 lbs. or less	
	<u>Floatplane:</u>	Wipline 3000 Amphibious: (+14.0) to (+19.0) at 2750 lbs. (+12.0) to (+19.0) at 2100 lbs. or less	
Empty weight C.G. range	None		
Maximum weight	Landplane: 2500 lbs. Floatplane: 2750 lbs.		
Number of seats	5 (2 at +20, 2 at +53, 1 at +83)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+72)		
Fuel capacity	47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wing at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)		
Oil capacity	IO-540: 8 qt. (-34), 5 qt. minimum (See NOTE 1 for data on oil system.)		
Control surface movement	(See NOTE 12)		
Serial numbers eligible	Model MT-7-260, S/N 27001C and up.		
Production basis	Production Certificate No. 11SO		

XXXII. Model M-7-260C, 5 PCLM (Normal Category) Approved October 19, 1998

(Same as M-7-235C except engine and propeller.)

Engine	Lycoming IO-540-V4A5
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	260 hp at 2700 rpm, full throttle continuous
Propeller and propeller limits	MT-Propeller constant speed 4 blade Model MTV-14-B/190-17 Diameter: Not over 75 in.; not under 69 in. Pitch settings at 26.18 in. sta.: low 12.0° $\pm 0.2^\circ$, high 32° $\pm 1^\circ$

Hartzell constant speed 2 blade Model HC-C2YR-1BF/F8477D-6
Hartzell constant speed 3 blade Model HC-C3YR-1RF/F7693(F) and (F)-2
Diameter: Not over 78 in.; not under 76 in.
Pitch settings at 30 in. sta.:
F8477D-6: low $13.5^{\circ} \pm 0.1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$
F7693: low $12.0^{\circ} \pm 0.2^{\circ}$ high $31^{\circ} \pm 1^{\circ}$
McCauley constant speed 2 blade Model B2D37C224/90RA-12
McCauley constant speed 3 blade Model B3D32C414/82NDA-4
Diameter: -12: Not over 78 in.; not under 78 in.
-4: Not over 78 in.; not under 78 in.
Pitch Settings at 30 in. sta.:
-12: low $13.4^{\circ} \pm 0.2^{\circ}$ high $29.5^{\circ} \pm 0.5^{\circ}$
-4: low $14.0^{\circ} \pm 0.2^{\circ}$ high $30.0^{\circ} \pm 0.5^{\circ}$
Spinner:
MT-Propeller spinner assembly P-238-A-1 (use with MT Propeller only)
Hartzell spinner assembly A2298-2 (use with Hartzell 2 blade prop only)
Hartzell spinner assembly C-3535-1P (use with Hartzell 3 blade prop only)
McCauley spinner assembly D-6195 (use with McCauley 2 blade prop only)
McCauley spinner assembly D-6240 (use with McCauley 3 blade prop only)
Governor: McCauley DC290D1(X)/T33

Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed Maximum structural cruising Maneuvering Flaps extended	182 mph (158 knots) 147 mph (128 knots) 125 mph (109 knots) 95 mph (83 knots)
	<u>Floatplane:</u>	(See NOTE 11)	
C. G. range	<u>Landplane:</u>	(+15.0) to (+20.0) at 2500 lbs. (+12.5) to (+20.0) at 1700 lbs. or less	
	<u>Floatplane:</u>	Wipline 3000 Amphibious: (+14.0) to (+19.0) at 2750 lbs. (+12.0) to (+19.0) at 2100 lbs. or less	
Empty weight C.G. range	None		
Maximum weight	Landplane:	2500 lbs.	
	Floatplane:	2750 lbs.	
Number of seats	5 (2 at +20, 2 at +53, 1 at +83)		
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+72)		
Fuel capacity	47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wing at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)		
Oil capacity	IO-540: 8 qt. (-34), 5 qt. minimum (See NOTE 1 for data on oil system.)		
Control surface movement	(See NOTE 12)		
Serial numbers eligible	Model M-7-260C, S/N 30001C and up.		
Production basis	Production Certificate No. 11SO		

XXXIII. Model M-7-420AC, 5 PCLM (Normal Category) Approved December 17, 1998

(Same as M-7-235A except for main landing gear, flap ratchet, nacelle, engine, and propeller.)

Engine	Allison Gas Turbine 250-B17C	
Fuel	Primary:	Mil-T-5624L, grade JP-4 and JP-5, Mil-T-83133A, grade JP-8, ASTM-D-1655, Jet A, A1 or B, JP-1 Fuel conforming to ASTM-D-1655, Jet A, Artic Diesel Fuel DF-A (VV0F800B) conforming to ASTM-D-1655, Jet A or A1 Diesel #1 fuel conforming to ASTM-D-1655, Jet A
	Emergency:	Mil-G-5572, all grades (aircraft boost pump on; maximum of 6 hours operation per overhaul period of turbine through an engine operating range of idle to 90% maximum SHP)
	Cold Weather:	To assure consistent starts below 4°C (40°F), the following fuels may be necessary: MIL-T-5624, grade JP-4 ASTM-D-1655, Jet B AVGAS/Jet A, Jet A1 or Jet JP-5 mixture. (Refer to Cold Weather Fuels, para 2-48, for mixing/use of cold weather fuel in Allison Manual 11W2.)
Engine limits	369 hp - 90 psi torque, at 2030 rpm continuous	
Propeller and propeller limits	Hartzell, constant speed, full-feathering beta, model HC-B3TF-7A/T10173F-21R Diameter: 80.5 - 78 inches Pitch settings at 30" sta.: Reverse pitch -15° ±5° feather 81.1° ±5° Spinner: Hartzell spinner assembly A3640P	
Maximum operating altitude	20,000 feet	
Airspeed limits (CAS)	Maximum operating	151 mph (131 knots)
	Maximum structural cruising	145 mph (126 knots)
	Maneuvering	121 mph (105 knots)
	Flaps extended	94 mph (82 knots)
C.G. range	(+15.0) to (+20.5) at 2500 lbs. (+13.1) to (+20.5) at 2090 lbs. or less Straight line variation between points given.	
Empty weight C.G. range	None	
Maximum weight	2500 lbs.	
Number of seats	5 (2 at +20, 2 at +53, 1 at +78)	
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)	
Fuel capacity	43 gal. (40 usable; two 21.5 gal. tanks in wings at +24 - considered one tank) Optional wing auxiliary tanks, 42 gal. (42 usable; two 21 gal. tanks in wing at +24) (See NOTE 1 for data on system fuel.)	
Oil capacity	10 qt. (-22.5), 9 qts. minimum (See NOTE 1 for data on system oil.)	
Control surface movements	(See NOTE 12)	
Serial numbers eligible	Model MX-7-420, s/n 29001C and up	
Production basis	Production Certificate No. 11S0	

XXXIV. Model **MX-7-160C**, 4 PCLM (Normal Category), Approved March 12, 1999

(Same as MX-7-160, except for spring aluminum main landing gear.)

Engine	Lycoming O-320-B2D
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	160 hp at 2700 rpm, full throttle continuous
Propeller and propeller limits	Sensenich fixed pitch 74DM7S5-0-52 or -54 or -56 (74" Dia.) or Sensenich fixed pitch 74DM7S8-0-52 or -54 or -56 (74" Dia.) Diameter: Not over 74 in., not under 72 in., no further reduction permitted. Static rpm at full throttle: Not over 2500 rpm, not under 2400 rpm (-54 or -56), Not over 2620 rpm, not under 2520 rpm (-52). Spinner: Sensenich spinner assembly C2346
Airspeed limits (IAS)	<u>Landplane:</u> Never exceed 185 mph (161 knots) Max. structural cruising 149 mph (129 knots) Maneuvering 125 mph (109 knots) Flaps extended 98 mph (85 knots)
C.G. range	<u>Landplane:</u> (+15.4) to (+20.5) at 2200 lbs. (+12.5) to (+20.5) at 1600 lbs. or less Straight line variation between points given.
Empty weight C.G. range	None
Maximum weight	2200 lbs.
Number of seats	4 (2 at +20, 2 at +56)
Maximum baggage	170 lbs. (+20), 350 lbs. (+42), 250 lbs. (+70)
Fuel capacity	47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks: 30 gal. (30 gal. usable; two 15 gal. tanks in wings at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)
Oil capacity	8 qt. (-36.5), 2 qt. minimum (See NOTE 1 for data on system oil.)
Control surface movements	(See NOTE 12)
Serial numbers eligible	Model MX-7-160C, s/n 34001C and up
Production basis	Production Certificate No. 11S0

XXII. Model **MX-7-180AC**, 4/5 PCLM (Normal Category), Approved May 4, 2000

(Same as MX-7-180A, except for aluminum spring main landing gear.)

Engine	Lycoming O-360-C1F or O-360-C4F
Fuel	100/100LL minimum grade aviation gasoline
Engine limits	180 hp at 2700 rpm, full throttle continuous
Propeller and propeller limits	Sensenich fixed pitch 76EM8S5-0-56 (76" Dia.) or 76EM8S8-0-56 (76" Dia.) Diameter: Not over 76 in., not under 76 in., no further reduction permitted.

	Static rpm at full throttle:	Not over 2500 rpm, not under 2400 rpm.	
	Spinner:	Sensenich spinner assembly C2346	
Airspeed limits (IAS)	<u>Landplane:</u>	Never exceed	185 mph (161 knots)
		Max. structural cruising	149 mph (129 knots)
		Maneuvering	125 mph (109 knots)
		Flaps extended	98 mph (85 knots)
C.G. range	<u>Landplane:</u>	(+15.9) to (+20.5) at 2400 lbs. (+12.4) to (+20.5) at 1740 lbs. or less Straight line variation between points given.	
Empty weight			
C.G. range	None		
Maximum weight	2400 lbs.		
Number of seats	4 (2 at +20, 2 at +56) Optional: 5(2 at +20, 2 at +53, 1 at +78)		
Maximum baggage	170 lbs. at (+20), 350 lbs. (+42), 250 lbs. (+70)		
Fuel capacity	47.6 gal. (43 gal. usable; two 23.8 gal. tanks in wings at +24) Optional wing auxiliary tanks 30 gal. (30 gal. usable; two 15 gal. tanks in wing at +24) or 42 gal. (42 gal. usable; two 21 gal. tanks in wings at +24) (See NOTE 1 for data on system fuel.)		
Oil capacity	8 qt. (-36.5), 5 qt. minimum (See NOTE 1 for data on system oil.)		
Control surface movements	(See NOTE 12)		
Serial numbers eligible	Model MX-7-180AC, s/n 33001C and up		
Production basis	Production Certificate No. 11S0		

DATA PERTINENT TO ALL MODELS:

Datum	Wing leading edge
Leveling means	Leveling lug and mark on bottom side of right wing root.
Certification basis	Part 3, Civil Air Regulations, effective May 15, 1956 as amended by 3-1 thru 3-5 and 3.705 as amended by 3-7; and FAR 36 amended thru 36-4 and FAR 23.955 in lieu of CAR 3.435 for the models M-5-235C, M-5-180C, M-5-210TC, M-6-235, M-5-200, M-6-180, M-7-235, MX-7-235, MX-7-180, MXT-7-180, MT-7-235, M-8-235, MX-7-160, MXT-7-160, MX-7-180A, MXT-7-180A, MX-7-180B, M-7-235A, and M-7-235B, M-7-235C, MX-7-180C, M-7-260, MT-7-260, M-7-260C, MX-7-160C, MX-7-180AC.

Special Certification Rules for the Model M-5-210TC:

FAR	21.101(b)	Amendment	21-42
	23.141		23-7
	23.909		23-7
	23.1041		23-7
	23.1043		23-7
	23.1047		23-7
	23.1093		23-17
	23.1143		23-17
	23.1183		23-15
	23.1305(p)		23-15
	23.1527		23-7
	23.1583(k)		23-7

Special Certification Rule for the Model MX-7-180:

FAR 23.1545 Amendment 23-23, October 30, 1978 in lieu of CAR 3.757 (Amendment 3-5, September 1, 1959)

Special Certification Rules for the Model MX-7-420, MXT-7-420, and M-7-420AC:

Part 3, Civil Air Regulations, effective May 15, 1956, as amended through 3-7; and FAR 36 as amended through 36-14, SFAR 27 as amended through 27-2, and the following FAR

Part 23 requirements for turbine engine installations:

23.45 (-21)	23.1027 (-14)
23.49 (-21)	23.1041 (-7)
23.65 (-21)	23.1043 (-21)
23.75 (-21)	23.1045 (-7)
23.77 (-21)	23.1091 (-7)
23.173 (-14)	23.1093 (-18)
23.175 (-17)	23.1103 (-7)
23.251 (-0)	23.1105 (0)
23.253 (-7)	23.1111 (-17)
23.335 (-16)	23.1121 (-18)
23.361 (-26)	23.1141 (-18)
23.371 (-7)	23.1143 (-17)
23.629 (-31)	23.1145 (-18)
(to include whirl mode)	
23.863 (-23)	23.1155 (-7)
23.901 (-18)	23.1165 (-17)
23.903 (-26)	23.1183
23.905 (-26)	23.1303 (-17)
23.929 (-14)	3.1305 (-26)
23.933 (-17)	23.1323 (-20)
23.937 (-7)	23.1337 (-18)
23.939 (-18)	23.1353 (-20)
23.943 (-18)	23.1505 (-7) & 3.187 or 23.333
23.951 (-15)	23.1521 (-21)
23.955 (-7)	23.1527 (-7)
23.977 (-17)	23.1529 (-26)
23.991 (-26)	23.1545 (-23)
23.997 (-15)	23.1549 (-12)
23.1013 (-15)	23.1557 (-23)
23.1015 (-15)	23.1583 (-23)
23.1019 (-15)	23.1587 (-23)

Type Certificate No. 3A23 issued August 10, 1961

Application for Type Certificate dated November 1, 1957

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the aircraft for certification. In addition, the following items of equipment are required:

(A) Stall Warning Indicator, Maule drawing 6016F

(B) The following FAA Approved Airplane Flight Manuals are required (Original AFM or any later FAA approved revision is acceptable):

1. Model M-4: AFM dated 3/15/66 with rev. 2 dated 5/1/84 is in effect for all M-4, M-4C, M-4S and M-4T
2. Model M-4-210, s/n 1001-1005 modified per Maule SL#6, 1001-1035 modified per Maule SL#7 (AD#65-28-04) and s/n 1036-1045, AFM dated 9/24/64 with rev. 1 dated 11/18/64 or AFM dated 3/15/66 with rev. 2 dated 3/15/66. When s/n 1001-1045 modified per Maule SL#15 for 2300# GW, AFM dated 3/15/66 with rev. 3 dated 10/15/68 must be incorporated.
3. Model M-4-210C, s/n 1001C-1074C, 1079C, 1080C, AFM dated 3/15/66 with rev. 2 dated 3/15/66; s/n 1001C-1074C, 1079C 1080C modified per Maule SL#15 for 2300# GW and s/n 1075C-1078C, 1081C-1085C, AFM dated 3/15/66 with rev. 3 dated 10/15/68; s/n 1086C-1117C, AFM dated 3/15/66 with rev. 4 dated 6/20/73
Note: Models M-4-210S and T were never produced.
4. Model M-4-220/C, (includes M-4-220, M-4-220C), AFM dated 9/28/66 with rev. 5 dated 5/1/84 Note: Model M-4-220T was never produced.
5. Model M-4-220S, s/n 2001S, AFM dated 9/28/66 (2100# GW)
Note: Rev. 1 to this AFM does not apply to this s/n.
6. Model M-4-180C, AFM dated 10/20/70 with rev. A dated 5/1/84
Note: Models M-4-180S and T were never produced.
7. Model M-5-220C, AFM dated 12/28/73 with rev. A dated 5/1/84
8. Model M-5-210C, AFM dated 12/28/73 with rev. B dated 5/1/84
9. Model M-5-235C, s/n 7001C-7026C, 7028C, 7030C-7032C, 7037C, AFM dated 4/6/76, with expanded C.G. limits per Maule SL#36, rev. B dated 11/6/80; s/n 7027C, 7029C, 7033C-7036C, 7038C-7248C, 7250C-7320C, 7322C-7346C, 7348C, 7349C, AFM dated 4/6/76 with rev. B dated 11/6/80; s/n 7350C, 7352C-7355C, 7357C-7362C, 7364C-7367C, AFM dated 4/6/76 with rev. C dated 4/22/81; s/n 7321C, 7347C, 7351C, 7363C, 7369C-7373C, 7375C, 7445C, 7451C, 7460C, 7467C, AFM dated 8/12/81 with rev. A dated 5/1/84.
Note: AFMs dated 4/6/76 must have AFM Supplement #13 attached. AFM dated 1/13/86 for s/n 7470C, 7478C-7480C, 7484C-7487C, 7515C
10. Model M-5-180C, AFM dated 4/19/79 for s/n 8001C-8014C, 8016C-8019C, 8021C, 8023C-8042C, 8044C-8064C, 8068C, 8069C with rev. D dated 4/12/84; AFM dated 6/12/85 for s/n 8070C-8094C
11. Model M-5-200, AFM dated 10/29/82, rev. B dated 6/10/94
12. Model M-5-210TC, AFM dated 2/4/80, rev. B dated 5/1/84
13. Model M-6-235, AFM dated 6/25/81, rev. I dated 6/10/94 for s/n 7249C, 7356C, 7379C-7465C; AFM dated 5/23/85, rev. B dated 6/10/94 for s/n 7466C, 7468C-7473C; AFM dated 2/19/87, rev. C dated 3/3/95 for s/n 7474C and up
14. Model M-6-180, AFM dated 9/15/82, rev. C dated 6/10/94
15. Model M-7-235, AFM dated 11/9/83, rev. F dated 10/17/94

16. Model MX-7-235, AFM dated 10/18/84, rev. F dated 10/28/94
17. Model MX-7-180, AFM dated 12/18/84, rev. E dated 10/28/94
18. Model MX-7-420, AFM dated 6/1/89, rev. E dated 10/26/98
19. Model MXT-7-180, AFM dated 11/9/90, rev. C dated 5/28/99
20. Model MT-7-235, AFM dated 3/20/92, rev. C dated 10/28/94
21. Model M-8-235, AFM dated 8/10/92, rev. D dated 1/26/96
22. Model MX-7-160, AFM dated 11/13/92, rev. D dated 5/28/99
23. Model MXT-7-160, AFM dated 11/13/92, rev. B dated 1/10/97
24. Model MX-7-180A, AFM dated 6/3/93, rev. B dated 5/11/95
25. Model MXT-7-180A, AFM dated 6/3/93, rev. C dated 5/28/99
26. Model MX-7-180B, AFM dated 7/12/93, rev. C dated 5/28/99
27. Model MXT-7-420, AFM dated 7/12/93, rev. B dated 10/26/98
28. Model M-7-235B, AFM dated 10/14/93, rev. C dated 1/26/96
29. Model M-7-235A, AFM dated 3/10/94, rev. B dated 1/26/96
30. Model M-7-235C, AFM dated 10/10/95
31. Model MX-7-180C, AFM dated 8/26/96, rev. B dated 5/28/99
32. Model M-7-260, AFM dated 4/17/98, rev. D dated 4/17/2000
33. Model MT-7-260, AFM dated 4/17/98, rev. D dated 4/17/2000
34. Model M-7-260C, AFM dated 10/15/98, rev. C dated 4/17/2000
35. Model M-7-420AC, AFM dated 12/17/98, rev. A dated 4/4/2000
36. Model MX-7-160C, AFM dated 3/12/99, rev. D dated 4/4/2000
37. Model MX-7-180AC, AFM dated 5/4/2000

Note 1

Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

The certificated empty weight and corresponding center of gravity location must include unusable fuel and undrainable oil as follows:

Fuel 18 lbs. (+24) (20 gal. main)	M-4 series, M-4-210 series, M-4-220 series, M-4-180 series, M-5-210C, M-5-220C, M-5-210TC, M-5-235C, M-5-200, M-6-235, M-6-180, M-7-235, MX-7-235, MX-7-180, MXT-7-180, MT-7-235, M-8-235, MX-7-160, MXT-7-160, MX-7-180A, MXT-7-180A, MX-7-180B, M-7-235B, M-7-235A, M-7-235C, MX-7-180C
Fuel 27.6 lbs. (+24) (21.5 gal. main)	M-7-235, MX-7-235, MX-7-180, MXT-7-180, MT-7-235, M-8-235, MX-7-160, MXT-7-160, MX-7-180A, MXT-7-180A, MX-7-180B, M-7-235B, M-7-235A, M-7-235C, MX-7-180C, M-7-260, MT-7-260, M-7-260C, MX-7-160C, M-6-235, MX-7-180AC.
Fuel 16.2 lbs. (+24) (40.6 gal. main)*	MX-7-420, MXT-7-420

Fuel 31 lbs. (+24) (43 gal. main)*	MX-7-420, MXT-7-420, M-7-420AC
* Two main tanks considered one tank	
Oil 8 lbs. (-37)	M-4 series
Oil 6 lbs. (-37)	M-4-220 series, M-4-180 series, M-4-210 series, M-5-220C, M-5-210C
Oil 6 lbs. (-36.5)	M-5-180, M-5-210TC, M-5-200, M-6-180, MX-7-180, MXT-7-180, MX-7-160, MXT-7-160, MX-7-180A, MXT-7-180A, MX-7-180B/-180C, MX-7-160C, MX-7-180AC
Oil 6 lbs. (-34)	M-5-235C, M-6-235, M-7-235, MX-7-235, MT-7-235, M-7-235B, M-7-235A, M-7-235C, M-7-260, MT-7-260, M-7-260C
Oil 20 lbs. (-22.5)	MX-7-420, MXT-7-420, M-7-420AC

Note 2 The following placards shall be displayed:

(A) In front of and in clear view of the pilot:

1. For all M-4 models:

"THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND MANUALS."

For M-5 and subsequent models:

"THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATION LIMITATIONS STATED IN THE AIRPLANE FLIGHT MANUAL AND IN THE FORM OF PLACARDS AND MARKINGS."

2. "NO ACROBATIC MANEUVERS, INCLUDING SPINS, APPROVED." or
"AEROBATIC MANEUVERS, INCLUDING SPINS, ARE NOT APPROVED."
3. For M-4 series, M-5 series, M-6 series, M-7-235, and MX-7-235:
"ROUGH AIR OR MANEUVERING SPEED 125 MPH."

For MX-7-180:

"ROUGH AIR OR MANEUVERING SPEED: 129 MPH (112K)"

For MX-7-420, MXT-7-420 and M-7-420AC:

"ROUGH AIR OR MANEUVERING SPEED IS 121 MPH (105K)"

For MXT-7-180, MT-7-235, M-8-235, MX-7-160, MXT-7-160, MX-7-180A, MXT-7-180A, MX-7-180B, M-7-235B, M-7-235A, M-7-235C, MX-7-180C, M-7-260, MT-7-260, M-7-260C, MX-7-160C, and MX-7-180AC:

"MANEUVERING SPEED: 125 MPH IAS (109K)."

4. One of the following placards must be installed in the M-4 and M-4-210:
 - a. "THIS AIRCRAFT APPROVED FOR DAY VFR FLIGHT ONLY."
 - b. "THIS AIRCRAFT APPROVED FOR DAY OR NIGHT VFR FLIGHT." (If equipment and instruments conforming to FAR 91.33(c) are installed.)
 - c. "THIS AIRCRAFT APPROVED FOR DAY OR NIGHT VFR OR IFR FLIGHT." (If equipment and instruments conforming to FAR 91.33(d) and FAR 91.170 are installed.)

The following placard must be installed on all models except the M-4 and M-4-210:

"THIS AIRCRAFT APPROVED FOR DAY OR NIGHT IFR NON-ICING FLIGHT WHEN EQUIPPED IN ACCORDANCE WITH FAR 91 OR FAR 135."

5. "SEE LOADING INSTRUCTIONS IN WEIGHT AND BALANCE SECTION OF AIRPLANE FLIGHT MANUAL."
6. "FUEL REMAINING IN TANK WHEN INDICATOR READS ZERO CANNOT BE USED SAFELY IN FLIGHT."
7. For M-5 and subsequent models except -420 series:

"DO NOT TURN OFF ALTERNATOR IN FLIGHT EXCEPT IN CASE OF EMERGENCY."

8. For -420 series:
"COMPASS UNRELIABLE WHEN HEATED INLET IS ON."
9. For -235 series (when using -6R propeller):
"DO NOT EXCEED 23 INCHES M.P. BELOW 2050 RPM."

For M-5-200:

"FOR CONTINUOUS OPERATION DO NOT EXCEED 24 INCHES OF MANIFOLD PRESSURE BELOW 2350 RPM."

For M-5-210TC:

"NOT MORE THAN 34" OF MANIFOLD PRESSURE AT PROPELLER SPEEDS LESS THAN 2350 RPM."
and "NOT LESS THAN 20" OF MANIFOLD PRESSURE AT PROPELLER SPEEDS BETWEEN 2250 AND 2450 RPM."

10. For MXT-7-180A:
"DEMONSTRATED CROSSWIND 15 MPH."
11. In addition to the above placards, the following is required when Fli-Lite 3000 MK IIIA skis are installed:

For M-4 series:

"SKIPLANE LIMITATIONS: MAXIMUM GROSS WEIGHT 1850 LBS.
DO NOT EXCEED 160 MPH. SKI OPERATION PROCEDURES: SET SELECTOR TO POSITION DESIRED THEN OPERATE PUMP UNTIL MAXIMUM PRESSURE IS DEVELOPED."

For M-4-210C series:

"SKIPLANE LIMITATIONS: MAXIMUM GROSS WEIGHT 2100 LBS. DO NOT EXCEED 160 MPH. SKI OPERATION PROCEDURES: SET SELECTER TO POSITION DESIRED THEN OPERATE PUMP UNTIL MAXIMUM PRESSURE IS DELVELOPED."

Additional placards listed in the applicable AFM Supplement for skiplane operation must be installed.

12. At the top of the instrument panel, to the right of the radio group:

For M-4, s/n 3-91, M-4-210, s/n 1001-1043, M-4-210C, s/n 1001C-1010C, or if no ashtray installed per Maule drawing 6007B:

"NO SMOKING"

13. On the instrument panel or wing root panel at the auxiliary fuel tank transfer switches, (if installed):

FUEL TRANSFER PUMPS

PUSH FOR
AUX. QUANT.
LEFT

PUSH FOR
AUX. QUANT.
RIGHT

FUEL CAPACITY: MAIN TANKS (*) GAL. USABLE EACH,
AUX. TANKS (**) GAL. USABLE EACH TANK.

* 20 gal. except M-7/MX-7/MXT-7/MT-7/M-8 series may have either 20 gal. or 21.5 gal.

** For M-4/M-5 series:	11.5 gal.
For M-6-180:	13.0 gal.
For M-6-235, s/n 7249C-7473C:	13.0 gal.
For M-6-235, s/n 7474C and up:	15.0 gal.
For M-7/MXT-7/MT-7/M-8 series and MX-7 series except those listed below:	15.0 or 21.0 gal.
For MX-7-420/MX-7-180/MX-7-235:	15.0 gal.

- (B) Located on the flap handle:

1. For M-4 series (all) and M-5-235C, s/n 7001C-7248C, 7250C- 7320C, 7322C-7346C, 7348C-7350C, 7352C-7362C, 7364C-7368C, M-5-180, s/n 8001C-8022C, M-5-210C (all), M-5-220C (all), M-5-210TC (all):

FLAPS - PULL ON/ 15° TAKEOFF/ 35° LANDING

or for M-5-235C, s/n 7321C, 7347C, 7351C, 7363C, 7369C and up, M-5-200, s/n 8015C and up, M-5-180C, s/n 8023C and up, and for M-5-235C, s/n 7001C-7248C, 7250C-7320C, 7322C-7346C, 7348C-7350C, 7352C-7362C, 7364C-7368C with Maule SL#44 c/w, M-5-180C, s/n 8001C-8022C with Maule SL#49 c/w, all M-5-210C with Maule SL#46 c/w, all M-5-220C with Maule SL#48 c/w, all M-5-210TC with Maule SL#47 c/w:

FLAPS - PULL ON/ 20° TAKEOFF/ 40° LANDING

2. For M-6-180/-235, M-7-235/-235A/-235B*/-235C/-260/-260C, MX-7-180/-180A*/-180B*/-180C/-180AC/-235/-160*/-160C:

FLAPS/PULL ON/ 2ND NOTCH/ TAKEOFF/ 4TH NOTCH/ LANDING

* "4TH NOTCH" is replaced by "3RD NOTCH" for M-7-235B S/N's 23001C thru 23003C, 23005C thru 23010C, and 23012C, MX-7-180A S/N's 20001C thru 20026C, 20028C, 20029C, and 20031C thru 20035C, MX-7-180B S/N's 22003C, 22006C, and 22007C, MX-7-160 S/N's 19001C thru 19034C and 19041C unless Mod Kit #11 is complied with.

3. For MX-7-420, MXT-7-180/-180A/-160/-420, MT-7-235/-260, M-8-235, M-7-420AC

FLAPS/PULL ON/2ND NOTCH/TAKEOFF/3RD NOTCH/LANDING

- (C) Located at the main fuel tank selector valve on left kick panel:

1. For M-4, s/n 23, 25-45:

TAKEOFF + LANDING	
LEFT ONLY	
21 GAL.	
	RIGHT 21 GAL.
OFF	

2. For M-4, s/n 24, 46-94, 1C-11C, 1S-3S, 1T-3T:

TAKEOFF + LANDING
BOTH TANKS
LEFT 21 GAL. RIGHT 21 GAL.
OFF

3. For M-4-220C, (s/n 2125C, 2127C, 2128C, 2137C, 2138C, 2140C and up), M-5-220C, M-5-200, M-5-210TC, M-5-235C/-180C, M-6-235C/-180C, MX-7-235/-180, M-7-235/-235A/-235B, MXT-7-180, MT-7-235, M-8-235, MX-7-160, MXT-7-160, MX-7-180A, MXT-7-180A, MX-7-180B, M-7-235C, MX-7-180C, M-7-260, MT-7-260, M-7-260C, MX-7-180AC:

FUEL SELECTOR VALVE
LEFT: 20* GAL.
OFF BOTH
RIGHT: 20* GAL.
*or 21.5 gal. for M-7/MXT-7/MT-7/M-8 series and MX-7-160/-180/-180A/-180B/-180C/-180AC

or for M-4-220C and early M-5-235C with SP2321-B3 Fuel Selector Valve: (Not applicable to M-5-235C s/n 7321C, 7347C, 7351C, 7363C, 7369C and up.):

LEFT
20 GAL.
RIGHT
20 GAL.
OFF

4. For M-4-210(C,S) and M-5-210C:

LEFT 20 GAL.		LEFT 20 GAL.
RIGHT 20 GAL.	or	BOTH
		RIGHT 20 GAL.
(Use with SP-2263-B3 or 10049E-6 Valve)		(Use with 10049E-7 Valve)

5. For -420 series:

FUEL SELECTOR VALVE
BOTH ON
OFF

(D) In rear cabin area:

1. For M-4 and M-5 series:
"BAGGAGE 250 LBS. MAXIMUM. FOR LOADING INSTRUCTIONS
SEE WEIGHT AND BALANCE INFORMATION."
2. For M-5 and subsequent models:
"CARGO OR BAGGAGE LIMITATIONS
MAX. LOAD AREA "A" 170 LBS.
MAX. LOAD AREA "B" 350 LBS.
MAX. LOAD AREA "C" 250 LBS."
3. For models with optional 5th seat installed and M-7/MT-7 series:
"CHECK WEIGHT AND BALANCE CAREFULLY WHEN USING 5TH SEAT
OR LOADING REAR CARGO/BAGGAGE."

"MAXIMUM REAR SEAT LOADING 170 LBS."

4. For M-7-235, s/n 4001C-4061C: (Unless Maule SK#15 is c/w)
 "BALLAST IN AFT FUSELAGE SHOULD BE REMOVED FOR LARGE AFT
 CABIN LOADS. THIS BALLAST SHOULD BE IN PLACE IN THE AFT
 FUSELAGE STORAGE FOR LIGHT/FORWARD LOADING."

Note 3 The models Bee Dee M-4 and M-4, s/n 3-23, 25-45 fuel systems do not comply with CAR 3.433 and 3.434 for horsepower greater than 125 at the best angle of climb speed, which is the most critical flight attitude, unless optional Modification Kit No. 36 is installed.

Note 4 The following aircraft were manufactured at Jackson, Michigan:

<u>Models</u>	<u>Serial numbers</u>
M-4	3-94
M-4C	1C-11C
M-4S	1S-3S
M-4T	1T-3T
M-4-210	1001-1045
M-4-210C	1001C-1074C, 1079C, 1080C
M-4-220C	2001C-2018C
M-4-220S	2001S

Note 5 Optional wing tips (ref. Maule drawing 9041F) have been approved for all M-4 series models except Bee Dee M-4 s/n 3-14.

Note 6 Equipment approved for all models is listed on the Required and Optional Equipment Lists.

Note 7 The following aircraft are eligible for manufacture under Production Certificate No. 11S0:

<u>Models</u>	<u>Serial numbers</u>
M-4 Series	(Spare parts)
M-5-220C	(Spare parts)
M-5-210C	(Spare parts)
M-5-235C	(Spare parts)
M-5-180C	(Spare parts)
M-5-200	(Spare parts)
M-5-210TC	(Spare parts)
M-6-235	7249C, 7356C, 7379C and up
M-7-235	4001C and up, and 12001C with STC SA2661SO (known as M-7-420)
M-6-180	8020C, 8065C-8067C and up
MX-7-235	10001C and up
MX-7-180	11001C and up
MX-7-420	13001C and up
MXT-7-180	14000C and up
MT-7-235	18001C and up
M-8-235	15001C and up
MX-7-180A	20001C and up
MXT-7-180A	21001C and up
MX-7-160	19001C and up
MXT-7-160	17001C and up
MX-7-180B	22001C and up
M-7-235B	23001C and up
M-7-235A	24001C and up
M-7-235C	25001C and up
MX-7-180C	28001C and up
M-7-260	26001C and up
MT-7-260	27001C and up
M-7-260C	30001C and up
M-7-420AC	29001C and up
MX-7-160C	34001C and up
MX-7-180AC	33001C and up

- Note 8 For M-4-220C, s/n 2178C and up, and all other M-4-220 airplanes which have complied with Maule SL#27, the maximum continuous throttle operation restriction may be removed and replaced by 220 hp - 2800 rpm all operations. Airplane Flight Manual Supplement No. 3 must be attached to the FAA approved Airplane Flight Manual for those airplanes incorporating Maule SL#27.
- Note 9 All Maule float installations require installation of wing tip mounted anti-collision light system conforming to Maule drawing 7045F for night flight.
- Note 10 For all aircraft except model Bee Dee M-4, s/n 3-14 and M-4 s/n 15-44, all placards required in the applicable approved Airplane Flight Manual and skiplane and floatplane AFM Supplements must be installed in the appropriate location.
- Note 11 Airspeed limits -

(A) For models M-5-180C/-210C/-220C/-235C/-210TC/-200, M-6-235/-180, M-7/M-8/MX-7-235:

<u>Landplane:</u>	Never exceed	180 mph (156 knots)
	Max. structural	
	cruising	145 mph (126 knots)
	Maneuvering	125 mph (109 knots)
	Flaps extended	94 mph (82 knots)

(B) For models M-5-210C/-220C/-235C, M-6-235, M-7-235, MX-7-235:

<u>Floatplane:</u>	Never exceed	164 mph (143 knots)
	Max. structural	
	cruising	145 mph (126 knots)
	Maneuvering	125 mph (109 knots)
	Flaps extended	94 mph (82 knots)

(C) For models M-7-235A/B/C, M-7-260/-260C and MT-7-235/-260:

<u>Floatplane:</u>	Never exceed	164 mph (143 knots)
	Max. structural	
	cruising	147 mph (128 knots)
	Maneuvering	125 mph (109 knots)
	Flaps extended	95 mph (83 knots)

(D) For models MX-7-180B/C:

<u>Floatplane:</u>	Never exceed	164 mph (143 knots)
	Max. structural	
	cruising	149 mph (129 knots)
	Maneuvering	125 mph (109 knots)
	Flaps extended	98 mph (85 knots)

(E) For models M-5-210C/-210TC/-220C/-235C, M-6/M-7-235, MX-7-235:

<u>Skiplane:</u>	Never exceed	160 mph (139 knots)
	Max. structural	
	cruising	145 mph (126 knots)
	Maneuvering	125 mph (109 knots)
	Flaps extended	94 mph (82 knots)

Note 12 Control surface movements for M-6 and subsequent models:

Wing flaps	Handle full down		$-7^{\circ} \pm 1^{\circ}$
	First Notch		$0^{\circ} \pm 1^{\circ}$
	Second Notch		$24^{\circ} \pm 3^{\circ}$
	Third Notch		$40^{\circ} \pm 3^{\circ}$
	Fourth Notch*		$48^{\circ} \pm 2^{\circ}$
Aileron	Up $20^{\circ} \pm 1^{\circ}$	Down	$20^{\circ} \pm 1^{\circ}$
Elevator	Up $30^{\circ} \pm 1^{\circ}$	Down	$20^{\circ} \pm 1^{\circ}$
Elevator tab	Up $14^{\circ} \pm 2^{\circ}$	Down	$28^{\circ} \pm 2^{\circ}$
Elevator tab			
w/piano hinge	Up $12^{\circ} \pm 2^{\circ}$	Down	$38^{\circ} \pm 2^{\circ}$
Rudder	Right $21^{\circ} \pm 1^{\circ}$	Left	$21^{\circ} \pm 1^{\circ}$
Rudder tab	Right $48^{\circ} \pm 4^{\circ}$	Left	$48^{\circ} \pm 4^{\circ}$

(Note: Rudder tab not installed on M-7-235 s/n 4001C- 4022C - M-7 Rudder w/tab may be installed per MK#4)

*Fourth Notch applicable to those models listed in Note 2 (B) 2.

Note 13 Aircraft models M-4-210, M-4-210C, M-4-220S, M-4-220C, M-5-210C, M-5-220C, M-5-235C, M-6-235, M-7-235/-235A/-235B/-235C/-260/-260C, MX-7-235/-180A/-180B/-180C, and MT-7-235/-260 are eligible for float installation when structural modifications have been incorporated per Maule drawings 9001F, Sheet 1, also required are structural modifications per 9001F, Sheet 2 for the following models: M-4-210C, M-4-220C, M-5-210C, M-5-220C, M-5-235C s/n 7001C-7460C, M-6-235 s/n 7249C, 7356C, 7379C-7465C, and MX-7-235 s/n 10001C-10005C.

Note 14 Propeller and propeller limits - For models M-5-235C, M-6-235, M-7-235, MX-7-235, M-8-235, M-7-235A, M-7-235B, and M-7-235C:

Hartzell constant speed model HC-C2YR-1BF/F8468A-6R or -3R
(-3R use with 7:00 tires or larger/26 psi minimum air pressure.)

Hartzell constant speed 2 blade model HC-C2YR-1BF/F8477D-6
(Use with O-540-J3A5 or O-540-B4B5 engine only)

Hartzell constant speed 3 blade model HC-C3YR-1RF/F7693(F)-(
(Use with O-540-J3A5 or O-540-B4B5 engine only)

Diameter:-3R: Not over 81 in.; not under 77 in.

-6R: Not over 78 in.; not under 77 in.

F8477D-6 or F7693(F)-(
(): Not over 78 in.; not under 76 in.

Pitch settings at 30" sta.:

-3R: low $16^{\circ} \pm 1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$ (O-540-J1A5D, O-540-J3A5, IO-540-W1A5D or IO-540-W1A5 engines)
low $13.8^{\circ} \pm 1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$ (O-540-B4B5 engine)

-6R: low $16.7^{\circ} \pm 1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$ (O-540-J1A5D, O-540-J3A5, IO-540-W1A5D or IO-540-W1A5 engines)
low $14.3^{\circ} \pm 1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$ (O-540-B4B5 engine)

F8477D-6: low $16.7^{\circ} \pm 1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$ (O-540-J3A5 engine)
low $14.3^{\circ} \pm 1^{\circ}$ high $30^{\circ} \pm 1^{\circ}$ (O-540-B4B5 engine)

F7693(F)-(
(): low $14.2^{\circ} \pm 1^{\circ}$ high $31^{\circ} \pm 1^{\circ}$ (O-540-J3A5 engine)
low $12.5^{\circ} \pm 1^{\circ}$ high $31^{\circ} \pm 1^{\circ}$ (O-540-B4B5 engine)

-6R: Do not exceed 23 in. M.P. below 2050 rpm.

McCauley constant speed 3-blade model B3D32C414-C/G-82NDA-2 or -4*
(-2 use with 7:00 tires or larger)

McCauley constant speed 2-blade model B2D37C224-B/G-90RA-9**
(-9 use with 7:00 tires or larger/26 psi minimum air pressure.)

Pitch settings at 30" sta.:

-2 (80"): low $15.0^{\circ} \pm 0.2^{\circ}$ high $30.0^{\circ} \pm 0.5^{\circ}$ (O-540-J1A5D, O-540-J3A5, IO-540-W1A5D or IO-540-W1A5 engines)
low $13.3^{\circ} \pm 0.2^{\circ}$ high $30.0^{\circ} \pm 0.5^{\circ}$ (O-540-B4B5 engine)

-4 (78"): low $15.7^{\circ} \pm 0.2^{\circ}$ high $30.0^{\circ} \pm 0.5^{\circ}$ (O-540-J1A5D, O-540-J3A5, IO-540-W1A5D or IO-540-W1A5 engines)
low $14.0^{\circ} \pm 0.2^{\circ}$ high $30.0^{\circ} \pm 0.5^{\circ}$ (O-540-B4B5 engine)

-9 (81"): low $14.7^{\circ} \pm 0.2^{\circ}$ high $24.6^{\circ} \pm 0.5^{\circ}$ (O-540-J1A5D, O-540-J3A5, IO-540-W1A5D or IO-540-W1A5 engines)
low $13.3^{\circ} \pm 0.2^{\circ}$ high $24.6^{\circ} \pm 0.5^{\circ}$ (O-540-B4B5 engine)

Spinner: Hartzell spinner assembly A2298-2 (use with Hartzell propeller only)
 McCauley spinner assembly D-6240 (use with McCauley 3-blade propeller only)
 McCauley spinner assembly D-6195 (use with McCauley 2-blade propeller only)

Governor: Woodward F210681*** or B210761 (O-540-J1A5D, O-540-J3A5, IO-540-W1A5D or IO-540-W1A5 only);
 E210761 (O-540-B4B5 only)
 McCauley C290D3(X)/T30 or DC290D1(X)/T14 (O-540-J1A5D, O-540-J3A5, IO-540-W1A5D or
 IO-540-W1A5 only);
 C290D3(X)/T31 or DC290D1(X)/T15 (O-540-B4B5 only)

* McCauley B3D32C414-C/G-82NDA-4 not approved for installation on M-5-235C with O-540-J1A5D,
O-540-J3A5, IO-540-W1A5D or IO-540-W1A5 engines.

** McCauley B2D37C224-B/G-90RA-9 not approved for installation on M-5-235C, M-6-235, M-7-235, MX-7-235
with O-540-B4B5 engines.

*** For Woodward Governor F210681 on M-5-235C refer to AD#81-25-01 for eligible serial numbers.

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